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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

SEARCH REQUEST FORM

11-771

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Q16528; PREMBLREL. 01, C:
01-NOV-1996 (TREMBLREL. 01, L:
01-NOV-1996 (TREMBLREL. 06, L:
VEGF RELATED FACTOR ISOFORM V
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064290;
01-NOV-1996
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EMBL; U43368; G1216396; -.
EMBL; U543819; G1488259; -.
PROSITE: PS00249; PDGF; 1.
PFAM: PF00341; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE: 96325041.
OLOFSSON B., PAJUSOLA K., VON EULER G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRIMMOND S., LAGERCRANTZ J., DRINKWATER C., POLLOCK P., GOTLEY D., CARSON E., RAKAR S., HAYWARD N., WEBER G.; GENOME RES. 6:122-129(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OLOFSSON B.;
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MEDLINE; 96325041.
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21602 MW;
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M VRF186 PRECURSOR.
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LAST SEQUENCE UPDATE)
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Pred. No. 0.00e+00;
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VEGF RELATED FACTOR ISOFORM VRF186.
: 16BDF6F1 CRC32;
                                                      PRT;
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CORE PROTEIN.
LAMININ ALPHA 3B CHAIN
PAC CLONE 248015 FROM
POLYPEPTIDE.
POLYPROTEIN.
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Matches 3
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O35485; O1-JAN-1998 (TREMBLREL. O5, C
O1-JAN-1998 (TREMBLREL. O5, L
O1-JUN-1998 (TREMBLREL. O6, L
VASCULAR ENDOTHELIAL GROWTH F
                                                                                                                                                               SUBATTA S.J., PEPPER M.S.;
SUBATTED (NOV-1997) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; AF032925; G2641622; -.
PROSITE; PS00249; PDGF; 1.
PFAM; PF00341; PDGF; 1.
NON_TER
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                                                                                                                                          SEQUENCE
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EUKARYOTA: METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN
(VASCULAR ENDOTHELIAL GROWTH FACTOR B 186).
VRF OR VEGF-B.
WRF OR VEGF-B.
WUS MUSCULUS (MOUSE).
EUKHARYOTA, METAZOA; CHORDATA; VERTEBRATA; TETRAPODA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                 EUTHERIA;
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MEDLINE; 96183052.
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J. BIOL. CHEM. 271:19310-
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MEDLINE; 9632
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                                                      h 11.8%;
Similarity 100.0%;
26; Conservative
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Similarity 100.0%;
39; Conservative
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116 AA;
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                                                                                                                                        12743 MW;
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Pred. No.
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LAST ANNOTATION UPDATE)
FACTOR B 186 PRECURSOR
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                                                                                                                                     1C6E2733 CRC32;
                                                    re 26; DB 11; Le
d. No. 6.91e-52;
Mismatches 0;
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RESULT 5
ID 042571; PRELIMINARY; PRT; 148 AA.
AC 042571;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
DT VASCULAR ENDOTHELIAL GROWTH FACTOR 122.
GN VEGF.
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O54881; PRELIMINARY: PRT; 150 AA.
O1-3UN-1998 (TREMBLREL. O6, CREATED)
O1-JUN-1998 (TREMBLREL. O6, LAST SEQUENCE UPDATE)
O1-AUG-1998 (TREMBLREL. O7, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR B (FRAGMENT).
RATTUS NORVEGICUS (RAT).
RATTUS NORVEGICUS (RAT).
RATTUS NORVEGICUS (RAT).
                                                                                                                                                                                                                                                                         O42572 PRELIMINARY; PRT; 194 AA.
O42572; O1-JAN-1998 (TREMBLREL. 05, CREATED)
O1-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
O1-JAN-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR 196.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLEAVER O., TONISSEN K.F., SAHA M.S., KRIEG P.A.;
SUBMITTED (JUN-1997) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; AFO08593; G2271033; -.
PROSITE; PS00249; PDGF; 1.
PFAM; PF00341; PDGF.
SEQUENCE 148 AA; 17234 MW; 83E936CE CRC32;
SEQUENCE FROM N.A.
CLEAVER O., TONISSEN K.F., SAHA M.S., KRIEG P.A.;
SUBMITTED (JUN-1997) TO EMBL/GENBANK/DDBJ DATA BANKS
                                                                                                                                                             XENOPUS LAEVIS (AFRICAN CLAWED FROG).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XENOPUS LAEVIS (AFRICAN CLAWED FROG).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118 HSQCECRPKK 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125 HSQCECRPKK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.4%;
Local Similarity 100.0%;
les 23; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y match 4.5%;
Local Similarity 100.0%;
les 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 10; DI
Pred. No. 3.0
0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB 11;
Pred. No. 6.67e-43;
0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .03e-07
                                                                                                                                                                 TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AMPHIBIA;
                                                                                                                                                                 AMPHIBIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
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RESULT
1D 060263
AC 060263;
AC 060263;
DT 01-AUG-1998 (TREMBLREL. 07, CREATED)
DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
DT 01-AUG-1998 (TREMBLEL. 07, LAST ANNOTATION UPDATE)
DE SODIUM CHANNEL.
OS HOMO SAPIENS (HUMAN).
CC EUTHERIA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; PRIMATES.
RN [1]
RC 115SUB-TESTIS;
RA ISHIBASHI K., MARUMO F.;
RA ISHIBASHI K., MARUMO F.;
RA ISHIBASHI K., MARUMO F.;
RA EMBL; ABO10575; D1026837; -.
KW 10MIC CHANNEL.
SO SEQUENCE 532 AA; 59154 MW; 115D0C62 CRC32;
                                                                                                                                                                                                                                    RESULT AND SERVICE SER
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Best Local S
Matches 1
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Best Local Similarity 100.0%;
Matches 8; Conservative
                                                                                                                   Matches
                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ULT 8
060720; PRELIMINARY;
060720; (TREMBLREL 07, C
01-AUG-1998 (TREMBLREL 07, L
01-AUG-1998 (TREMBLREL 07, L
01-AUG-1998 (TREMBLREL 07, L
VASCULAR ENDOTHELIAL GROWTH F
                                                                                                                                                                                                                                                             TISSUE-RETINA;
JINGJING L., ROQUE R.S.;
SUBMITTED (MAY-1998) TO EMBL/GENBANK/DDBJ DATA BANKS.
EMBL; AF062645; G3139081; -.
NON_TER 1 1
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PROSITE; PS00249; PDGF; 1.
PFAM; PF00341; PDGF.
SEQUENCE 194 AA; 22672 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HOMO SAPIENS (HUMAN)
EUKARYOTA; METAZOA; (
                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EUTHERIA; PRIMATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125 HSQCECRPKK 134
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   121 CECRPKK 127
                                                         15 CECRPKK 21
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Similarity 100.0%;
10; Conservative
                                                                                                                                            Similarity 100.0%;
                                                                                                                                                                                                                                       96 AA; 11314 MW;
                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07, CREATED)
07, LAST SEQUENCE UPDATE)
07, LAST ANNOTATION UPDATE)
0WTH FACTOR 183 (FRAGMENT).
                                                                                                             Score 7; DB 4; I
Pred. No. 9.02e-01
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 8; DB 4; Length 532; Pred. No. 8.91e-03;
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Pred. No. 3.03e-07;
0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERTEBRATA;
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                                                                                                                                                                                                                                       D21D2474 CRC32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TETRAPODA;
                                                                                                                                                                       Length 96;
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RESULT ID Q: AC Q:

014962 Q14962;

PRELIMINARY;

PRT;

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RESULT 11
ID 052677
AC 052677;
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AC . QC

AC .
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Best Local S
Matches
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Best Local
                                                                                                                                                                                                                                                                                             WILSON R., AINSCOUGH R., ANDERSON K., BAYNES C., BERKS M., BONFIELD J., BURFON J., CONNELL M., COPSEY T., COOPER J., COULSON A., CRAXTON M., DEAR S., DU Z., DURBIN R., FAVELLO A., FULTON L., GARDNER A., GREEN P., HARKINS T., HILLIER L., JIER M., JOHNSTON L., JONES M., KERSHAW J., KIRSTEN J., LAISTER N., LATREILLE P., LIGHTNING J., LLOYD C., MCMURRAY A., MORTIMORE B., O'CALLAGHAN M., PARSONS J., PERCY C., RIEKEN L., ROOPEA A., SAUNDERS D., SHOWNKEEN R., SMALDON N., SMITH A., SONNHAMMER E., STADEN R., SULSTON J., THIERRY-MIEG J., THOMAS K., VAUDIN M., VAUGHAN K., WATERSTON R., WATSON A., WEINSTOCK L., WATERINSON-SPROAT J., WOHLDMAN P.; NATURE 368:32-88(1994).

EMBL; 237140; E257675; -.

EMBL; 237140; E257675; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            023663
023663;
02-3663;
01-NOV-1996
01-NOV-1996
01-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAENORHABDITIS ELEGANS.
EUKARYOTA; METAZOA; ACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINE; 95213014.

LARSSON C., LARDELLI M., WHITE I., LENDAHL U.;
GENOMICS 24:253-258(1994).

-!- FUNCTION: NOTCH 1, 2 AND 3 PLAY A COMBINATIONAL ROLE DURING VARIOUS CELL FATE DECISIONS AND MORPHOLOGICAL MOVEMENTS IN THE DEVELOPING CNG AND PROBABLY OTHER REGIONS OF THE EMBRYO.

-!- SIMILARITY: TO OTHER NOTCH-TYPE PROTEINS.
EMBL; X79439; G763116; -
DIFFERENTIATION; NEUROGENESIS; REPEAT; EGF-LIKE DOMAIN; TRANSMEMBRANOW THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBMITTED
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EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUL-1997 (TREMBLREL.
01-JUL-1997 (TREMBLREL.
01-JUL-1997 (TREMBLREL.
NEUROGENIC LOCUS NOTCH 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NOTCH3
                                                                                                                          53
                                                                                                                                                                                                               y Match
3.2%;
Local Similarity 100.0%;
nes 7; Conservative
                                                                                                                                                                  80 VPLTVEL
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                                                                                                                   VPLTVEL
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106 AA;
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(TREMBLREL.)
                      PRELIMINARY;
                                                                                                                                                                86
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llarity 100.0%;
Conservative
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; 11071 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL/GENBANK/DDBJ DATA BANKS
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01,
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04,
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04, LAST SEQUENCE UPDATE)
04, LAST ANNOTATION UPDATE)
PROTEIN (FRAGMENT).
                                                                                                                                                                                                          Score 7;
Pred. No.
0; Mism
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LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDAT
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Pred. No.
0; Misma
                    PRT;
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                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                   7; DB 5; Li
No. 9.02e-01
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                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
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9.02e-01
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                                                                                                                                                                                                                                                       Length 189;
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EVVVPLT- 140

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RESULT
AC Q55
AC Q56
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         Query Match
Best Local s
Matches
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Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 3.2%;
Best Local Similarity 100.0%;
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                 039628
039628;
01-JAN-1998
01-JAN-1998
01-JAN-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-EC45;
WANG Y.-D., ZHAO S., HILL C
SUBMITTED (JAN-1998) TO EME
EMBL; AF044505; G2921769;
NON_TER 1 1
SEQUENCE 193 AA; 21272 M
                                                                                                               SEQUENCE FROM N.A.
JEHLE J.A., VAN DER LINDEN I.F.A.,
VIRUS RES. 0:0-0(1997).
EMBL; AF002732; G2233189; -.
SEQUENCE. 207 AA; 23915 MW; D2F
                                                                                                                                                                                                                                                                           VIRUSES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JLT 12
Q52737
Q52737;
Q52737;
Q1-NOV-1996
                                                                                                                                                                                                                                                                                                                                                            ORF36L.
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01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UF
01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION
NITRILE HYDRATASE ALPHA SUBUNIT.
RHODOCOCCUS ERYTHROPOLIS.
PROKARYOTA; FIRMICUTES; ACTINOMYCETALES; NOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 93379358.

ROBERT D., NISHIYAMA M., HOR: BIOSCI. BIOTECHNOL. BIOCHEM. EMBL; D14454; G559379; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-JCM6823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155 PAPPGVP 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 Match 3.2%;
Local Similarity 100.0%;
Local Similarity 100.0%;
Local Similarity 100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAQAPVS
                                                                                                                                                                                                                                                                                             POMONELLA GRANULOVIRUS.
ES; DSDNA VIRUSES, NO RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAPPGVP
                                 3.28;
Similarity 100.08;
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(TREMBLREL.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207 AA;
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      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
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TO EMBL/GENBANK/DDBJ DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                    05,
05,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HORINOUCHI S., BEPPU T.;
HEM. 57:1323-1328(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WW;
Score
Pred.
0; M
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LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
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Pred.
0; M
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Pred. No.
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LAST ANNOTATION UPDATE)
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      Mismatches
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                              DB 14; I
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9.02e-01;
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9.02e-01
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AC Q11

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DT Q11

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DT 011
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Search completed: Mon Nov 30 13:11:02 1998 Job time: 58 secs.
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NEEDLINE; 92168017.

A HOUCK K.A., FERRARA N., WINER J., CACHIANES G., LI B., LEUNG D.W.;

A HOUCK ENDOCRINGL, 5:1806-1814(1991).

R EMBL; S85192; G246156; -.

R EMBL; S85124; E91787; JOINED.

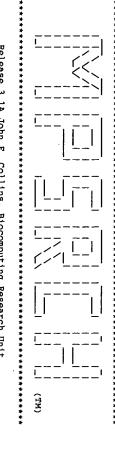
R EMBL; S85199; E91787; JOINED.

R EMBL; S85219; E91787; JOINED.

R EMBL; S85222; E91787; JOINED.
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Best Local Similarity 100.0%;
Matches 7; Conservative
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Best Local Similarity 100.0%;
Matches 7; Conservative
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Q16889
Q16889;
Q16889;
Q1-8089;
Q1-NOV-1996 (TREMBLREL. 01, CREATED)
Q1-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
Q1-VOV-1996 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR.
HOMO SAPIENS (HUMAN),
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-10;
EVANS P.S., BENKO M., HARRACH B., LETCHWORTH G.J.;
VIROLOCY 244:173-185(1998).
EMBL; AF038868; G3135468; -.
SEQUENCE 221 AA; 24149 MW; 22C990DC CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O71198
PRELIMINARY; PRT; 221 AA.
071198;
071-198;
01-AUG-1998 (TREMBLREL. 07, CREATED)
01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
01-AUG-1998 (TREMBLREL. 07, LAST AUNOTATION UPDATE)
HEXON-ASSOCIATED STRUCTURAL PROTEIN PVIII PRECURSOR.
BOVINE ADENOVIRUS TYPE 1.
VIRUSES; DSDNA VIRUSES, NO RNA STAGE; ADENOVIRIDAE; MASTADENOVIRUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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Pred. No. 9.02e-01; 
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          Score 7; DB 4; Length 232; Pred. No. 9.02e-01; 0; Mismatches 0; Indels
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Run on: MPsrch_pp protein - protein database search, using Smith-Waterman algorithm Mon Nov 30 13:09:25 1998; MasPar time 7.16 Seconds 827.945 Million cell updates/sec

Tabular output not generated.

Title: >US-09-033-662-2 (1-221) from US09033662.pep

Description: Perfect Score:

Sequence: 1 MRRCRISGRPPAPPGVPAQA......CQGRGLELNPDTCRCRKLRR 221

Scoring table: TABLE unitprotable Gap 60

Searched: 74019 seqs, 26840295 residues

Post-processing: Minimum Match 0% Listing first 100 summaries

Database: swiss-prot35 1:swissprot

Statistics: Mean 3.428; Variance 0.401; scale 8.545

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

†		*					
No.	Score	Match	Match Length	B	Ħ	Description	Pred. No.
<u>ا</u>	119	53.8	188	_ ;	VEGB_HUMAN	VASCULAR ENDOTHELIAL G	0.00e+00
2	39	17.6	188	_	VEGB_MOUSE	ENDOTHELIAL	4.34e-99
u	1	3.2	146	┥	VEGF_SHEEP	VASCULAR ENDOTHELIAL G	3.30e-01
4	7	3.2	164	_	VEGF_CAVPO	VASCULAR ENDOTHELIAL G	3.30e-01
_ل ى	7	3.2	190	ᆫ	VEGF_PIG		3.30e-01
Φ	7	3.2	190	<u>, , , , , , , , , , , , , , , , , , , </u>	VEGF_BOVIN	VASCULAR ENDOTHELIAL G	3.30e-01
7	7	3.2	190	<u>-</u>	VEGF_RAT	VASCULAR ENDOTHELIAL G	3.30e-01
œ	7	3.2	202	_	CR2_HORVU	COLD-REGULATED PROTEIN	3.30e-01
Q	7	3 2	206	_	NHAA_RHOER	NITRILE HYDRATASE SUBU	3.30e-01
10	7	3.2	214	Н	VEGF_MOUSE	VASCULAR ENDOTHELIAL G	3.30e-01
11	7	3.2	215	_	VEGF_HUMAN	VASCULAR ENDOTHELIAL G	3.30e-01
12	7	3.2	224	μ.	EFA4_MOUSE	EPHRIN-A4 PRECURSOR (E	3.30e-01
13	7	3 .2	329	_	Y146_HAEIN	HYPOTHETICAL PROTEIN H	3.30e-01
14	7	3.2	443	ш	SOX3_HUMAN	TRANSCRIPTION FACTOR S	3.30e-01
15	7	3.2	483	_	COA2_BPPF3	MINOR COAT PROTEIN (OR	3.30e-01
16	7	3.2	562	μ	SIS2_YEAST	SIS2 PROTEIN (HALOTOLE	3.30e-01
17	7	3.2	640	ட	DEXT_ARTSP	DEXTRANASE PRECURSOR (3.30e-01
18	7	3.2	1013	Н	PTPX_MACNE	PROTEIN-TYROSINE PHOSP	3.30e-01
19	7	3.2	1015	سر	PTPX_HUMAN	PROTEIN-TYROSINE PHOSP	3.30e-01
20	7	3.2	2481	μ	UN52_CAEEL	BASEMENT MEMBRANE PROT	3.30e-01
21	σ	2.7	66	_	RGS7_RAT	REGULATOR OF G-PROTEIN	2.50e+01
22	σ	2.7	71	۳	YAZ1_PSEAE	HYPOTHETICAL PROTEIN I	2.50e+01
23	6	2.7	117	_	RS25_CAEEL	PROBABLE 40S RIBOSOMAL	2.50e+01

0440000400400	1161 1173 1173 1173 1173 1174 1174 1174 117	C 4 1
	H FUSE_BURCE I TLP_WHEAT I YGFB_ECOLI I YGFB_ECOLI I RGS6_HUMAN I PAX9 HUMAN I PTAX9 HUMAN I YKD4_CAEEL I YKK6_CAEEL I YKR6_CAEEL	
COAY PROTEIN VPI (CONT HYPOTHETICAL 72.2 KD P GAG POLYPROTEIN (CORE SINGLE-MINUED HOMOLOG T-BRAIN-1 PROTEIN (T-B T-BRAIN-1 PROTEIN (T-B 1-PHOSPHATIDYLINOSITOL HYPOTHETICAL 81.4 KD P 1-PHOSPHATIDYLINOSITOL PATHOGENESIS-RELATED H QUINIC ACID UTILIZATIO HYPOTHETICAL PROTEIN H PUTATIVE CUTICLE COLLA	ANTHER-SPECIFIC PROTEIN FUSARIC ACID RESISTANCE THAUMATIN-LIKE PROTEIN HYPOTHETICAL 21.5 KD PROTEIN PAIRED BOX PROTEIN PARED BOX PROTEIN CDATING COLOR PROTEIN COLOR PROTEIN COLOR PROTEIN CAPSID PROMED PROTEIN (CAPSID PROTEIN CAPSID PROTEIN PROTEIN PROTEIN PARED BOX PROTEIN SERIES PROTEIN FRECURSOR (CAPSON PROTEIN SERIES PROTEIN PROT	PHORBOLIN I (FRAGMENTS HYPOTHETICAL 17.4 KD P
38888888888888888888888888888888888888	2.5000000000000000000000000000000000000	N N

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RESULT
ID VI
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DT 0:
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DT 0:
DT 0:
CON V.
CON V.
CON M.
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Best Local S
Matches 11
                           VEGB_MOUSE STANDARD; PRT; 188 AA. P49766; P49766; O1-OCT-1996 (REL. 34, CREATED) O1-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE) O1-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE) VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR (ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (VRF)
                       VEGFB OR VRF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
98
100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VEGB_HUMAN
P49765;
01-OCT-1996
                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                    EMBL; U48801; G1234823;
EMBL; U43369; G1216398;
                                                                                                                                                                                                                                                                                                                   -!- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEBRAIN -!- TISSUES SPECIFICITY: EXPRESSED IN ALL TISSUES EXCEPT LITHIGHEST LEVELS FOUND IN HEART, SKELETAL MUSCLE AND PAND -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH |
                                                                                                                                                                                                                                                                                                                                                                          GRIMMOND S., LAGERCRANTZ J., DRINKWATER C., SILINS POLLOCK P., GOTLEY D., CARSON E., RAKAR S., NORDENS WARD L., HAYWARD N., WEBER G.; GENOME RES. 6:122-129(1996).

-!- FUNCTION: GROWTH FACTOR FOR ENDOTHELIAL CELLS.
-!- SUBUNIT: HOMODIMER, DISULFIDE-LINKED. CAN ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                       OLOFSSON B., PAJUSOLA K.,
SAKSELA O., ORPANA A., PET
PROC. NATL. ACAD. SCI. U.:
                                                                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE; 96197355.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VEGFB OR VRF.
HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1996 (REL. 34, CREATED)
01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR (VEGF-B) (VEGF RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EUTHERIA; PRIMATES.
                                                                                                                                                                     17
                                                                                                                                 77
                                                                                                                                                  78
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             MUSCULUS (MOUSE)
                                                                                                                                    CGGCCPDDGLECVPTGQHQVRMQILMIRYPSSQLGEMSLEEHSQCECRPKKKDSAVKPD 136
                                                                                                                                                                          PAQAPVSQPDAPGHQRKVVSWIDVYTRATCQPREVVVPLTVELMGTVAKQLVPSCVTVQR
                                                                                                                                                                                                                                                                                                                                                                      WITH VEGF.
                                                                                                                        CGGCCPDDGLECVPTGQHQVRNQILMIRYPSSQLGEMSLEEHSQCECRPKKKDSAVKPD
                                                                                                                                                               PAQAPVSQPDAPGHQRKVVSWIDVYTRATCQPREVVVPLTVELMGTVAKQLVPSCVTVQR
                                                                                                                                                                                                       53.8%;
l Similarity 100.0%;
119; Conservation
                                                                                                                                                                                                                                                                ; PS00249; PDGF; GROWTH FACTOR; 1 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \sigma\sigma\sigma\sigma\sigma
      METAZOA;
                                                                                                                                                                                                                                             188 AA;
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21261 MW;
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1150
1188
1188
3164
   CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                     1.
SIGNAL; HEPARIN-BINDING.
POTENTIAL.
FORDOTHELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                     K., KAIPAINEN A., VON EULER G
PETTERSSON R.F., ALITALO K.,
U.S.A. 93:2576-2581(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \mu \mu \mu \mu \mu
                                                                                                                                                                                                    Score 119; Ub 1, 77ed. No. 0.00e+00; 77ed. 0;
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2ACA_HUMAN
DPOL_ADE40
TEGU_HSV11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                            35EA8904 CRC32;
                                                                                                                                                                                                                                                    ENDOTHELIAL
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PROTEIN PHOSPHATASE PP
DNA POLYMERASE (EC 2.7
LARGE TEGUMENT PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
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                                       (VEGF-B)
                                                                                                                                                                                                                       Length 188
                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                    GROWTH FACTOR
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   MAMMALIA;
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                                                                                                                                                                                                                                                                                                                                                                           HETERODIMER
                                                                                                                                                                                                                                                                                                                                        LIVER
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2.50e+01
2.50e+01
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Best Local S
Matches 3
         PROSITE;
MITOGEN;
SIGNAL
                                     EMBL;
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VEGF_SHEEP STANDAI
P5041;
01-OCT-1996 (REL. 34,
01-OCT-1996 (REL. 34,
01-WCV-1997 (REL. 35,
VASCULAR ENDOWHELIAL (PERMEABILLITY FACTOR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -I- SIMILARITY: BELONGS TO T

EMBL; U48800; G1334825; -.

EMBL; U48837; G1314336; -.

MGD; MGI:106199; VRF.

PROSITE; PS00249; PDGF; I.

MITOGEN; GROWTH FACTOR; SIGNAL
                                                                                    PERMEABILITY.

-!- SUBUNIT: HOMODIMER, DISULFIDE-LINKED.

-!- SUBCELLULAR LOCATION: SECRETED BUT REMAINS

-!- SUBCELLULAR MATRIX UNLESS RELEASE!
                                                                                                                                                        J. REPROD. FERTIL. 108:157-165(1996).
-!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS,
CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION
                                                                                                                                                                                                       REDMER D.A., DAI Y., LI J., CHARNOCK-JONES REYNOLDS L.P., MOOR R.M.;
                                                                                                                                                                                                                                                                                           OVIS ARIES (SHEEP).
EUKARYOTA; METAZOA; CHC
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
SEQUENCE
                                                                                                                                                                                                                                   MEDLINE; 97117958
                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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BIOCHEM. BIOPHYS. RES. COMMUN. 220:922-928(1996).
-I- FUNCTION: GROWTH FACTOR FOR ENDOTHELIAL CELLS. BINDS HEPARIN.
-I- SUBUNIT: HOMODIMER, DISULFIDE-LINKED. CAN ALSO FORM HETERODIMER
WITH VEGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OLOFSSON B., PAJUSOLA K., KAIPAINEN A., SAKSELA O., ORPANA A., PETTERSSON R.F., PROC. NATL. ACAD. SCI. U.S.A. 93:2576-2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SUBCELLULAR LOCATION:
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OLOFSSON B., PAJUS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 96183052
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[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FISSUE-HEART;
                                                                        SIMILARITY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TO THE EXTRACELLULAR MATRIX UNLESS RELEAR TISSUE SPECIFICITY: ABUNDANTLY EXPRESSED AND SKELETAL MUSCLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQLVPSCVTVQRCGGCCPDDGLECVPTGQHQVRMQILMI 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQLVPSCVTVQRCGGCCPDDGLECVPTGQHQVRMQILMI
                                                            x89506;
GROWTH FACTOR;
1 26
27 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 17.6%;
Similarity 100.0%;
39; Conservative
                                           9506; G899351;
PS00249; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RODENTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAGERCRANTZ J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                            34, CREATED)
34, LAST SEQUENCE UPDATE)
35, LAST ANNOTATION UPDATE)
IAL GROWTH FACTOR PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188 T
21442 MW;
                                                                                                                                                                                                                                                                                                          CHORDATA;
                                                                                                                                                                                                                                                                                                                                                    (VPF).
; 1.
; GLYCOPROTEIN; SIGNAL
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.
SIGNAL; HEPARIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TO THE
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HAYWARD N.
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Pred.
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VASCULAR EN
7999A3C8
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                                                                     PDGF/VEGF FAMILY
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No. 4.34e-99;
ENDOTHELIAL
                            SIGNAL.
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RELEASED BY HEPARIN
RESSED IN HEART, BRA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC32;
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                                                                                                                                                                                                                                                                                                       TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FAMILY
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                                                                                                                                                                                                                   D.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               103
                                                                                                                                                                                                                                                                                                                                                               (VEGF)
                                                                                                  ASSOCIATED TO
BY HEPARIN (H
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                                                                     OF.
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GROWTH FACTOR
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                                                                     GROWTH
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                                                                                                                                                         VASCULAR
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                                                                     FACTORS
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                                                                                                              CELLS
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Best Local :
Matches
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Best Local
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DISULFID
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CARBOHYD
SEQUENCE
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MITOGEN;
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DISULFID
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P26617;
P26617;
01-AUG-1992 (REL. 23, CREATED)
01-AUG-1992 (REL. 23, LAST SEQUENCE UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) (VASCULAR PERMEABILITY
                                                                            VEGF_PIG STANDARD: PRT: 190 AA. P49151; 01-FEB-1996 (REL. 33, CREATED) 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE) 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR PERMEABILITY FACTOR) (VPF).
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-!- FUNCTION: GROWTH FACT
CELL GROWTH. INDUCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAVIA PORCELLUS (GUINEA PIG).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FACTOR) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- SIMILARITY: BELONGS TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                121 CECRPKK 127
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LI: BELONGS TO THE PDGF,

LIE; PS00229; PDGEF; 1.

TOGEN; GROWTH FACTOR; GLYCOPROTEIN.

TLFID 56 101 BY ST.

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SUBCELLULAR LOCATION: SECRETED BUT REMAINS A
TO THE EXTRACELLULAR MATRIX UNLESS RELEASED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         CECRPKK 107
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Similarity 100.0%;
7; Conservative
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Pred. No.
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BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
POTENTIAL.
W; AEEBBDF3 CRC32;
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INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
POTENTIAL.
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Pred. No.
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1. No. 3.30e-01;
M1smatches (
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. 3.30e-01
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 164;
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SUS SCROFA (PIG).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; ARTIODACTYLA.

VERTEBRATA;

TETRAPODA;

MAMMALIA;

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Query Match
Best Local Similarity 100.0%;
Matches 7; Conservative
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P15691;
01-APR-1990 (REL. 1
01-APR-1990 (REL. 1
01-OCT-1996 (REL. 2
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SHARMA H.S., TANG Z.H., GHO B.C.H., VERDOUW P.D.;

BIOCHIM. BIOPHYS. ACTA 1260:235-238(1995).

-i- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIGGENESIS, AND E.

CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AND VA

PERMEABLLITY (BY SIMILARITY).

-i- SUBUNIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY).

-i- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED
TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARI
                                                                     01-APR-1990 (REL. 14, CREATED)
01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR PERMEABILITY FACTOR) (VPF).
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SEQUENCE FROM N.A.
TISSUE-HEART;
                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND SEQUENCE MEDLINE; 90069608.
LEUNG D.W., CACHIANES G., KUANG W. SCIENCE 246:1306-1309(1989).
                                                                                                                                                                                                                                                                                               BOS TAURUS (BOVINE).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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                                                                                                                                                                SEQUENCE OF 27-190 FROM N.A. MEDLLNE; 90121225.
TISCHER E., GOSPODAROWICZ D., MARCHER E., CRISP T., FIDDES J.C., BIOCHEM. BIOPHYS. RES. COMMUN.
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   EMBL;
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MEDLINE; 89286596.
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SIMILARITY).
SIMILARITY: BELONGS TO
L; M32976; G163007; -.
                                   PERMEABILITY.
SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
SUBCELLULAR LOCATION: SECRETED BUT RE
TO THE EXTRACELLULAR MATRIX UNLESS RE
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FE; PS00249; PDGF;
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Pred. No.
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INTERCHAIN (BY SIMILAR
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                                                                                                                                                                MITCHELL R., SILVA M
, ABRAHAM J.A.;
1. 165:1198-1206(1989)
                                                                                                                                                                                                                                                                                                            VERTEBRATA;
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              PDGF/VEGF
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              FAMILY
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                                                                                                                                                                                SILVA M.,
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              GROWTH
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Query
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SIGNAL
                                                                                                                                                                                                                                                                                                PROSITE; MITOGEN;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGE_RAT STANDARD; PRT; 190 AA. P16612; 01-AUG-1990 (REL. 15, CREATED) 01-AUG-1990 (REL. 15, LAST SEQUENCE UPDATE) 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR PERMEABILITY FACTOR) (VPF).
                                                                                                                                                                                                                                                                                                                                                     -!- SIMILARITY:
EMBL; M32167; G1
PIR; A35987; A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PALISI T.M., HOPE D.A., THOMAS K.A.;
PROC. NATL. ACAD. SCI. U.S.A. 87:2628-2633(1990).
-i- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS,
CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION
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PIR; /
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                                                    SEQUENCE
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EUTHERIA; 1
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  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY).

TISSUE SPECIFICITY: EXPRESSED IN THE PITUITARY, IN BRAIN, PARTICULARLY IN SUPRAOPTIC AND PARAVENTRICULAR NUCLEI AND CHOROID PLEXUS. ALSO FOUND ABUNDANTLY IN THE CORPUS LUTEU THE OVARY AND IN KIDNEY GLOMERULI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT: HOMODIMER, DISULFIDE-LINKED SUBCELLULAR LOCATION: SECRETED BUT RETO THE EXTRACELLULAR MATRIX UNLESS RE
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A33787;
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M33750;
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G163811;
                                                                                                                                                                                                                                                                                                                                                                                 G204288;
                                                    A,
                                                                             FACTOR;
126
7 190
7 193
127
129
129
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129
                                                                                                                                                                                                                                                                                                                                                                                                          BELONGS
                                                                                                                                                                                                                                                                                                                            PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (RAT).
A; CHORDATA;
                                                    22396
  3.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                          TO THE PDGF/VEGF FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF
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GLYCOPROTEIN;
                                                                                                                                                                                                                                                                                                GLYCOPROTEIN;
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BY SIMILARITY.
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INTERCHAIN (BY SIMILANITY SIMILANITY)
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Pred.
     Score
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                                                    B64CA99F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re 7; DB 1; Leng
d. No. 3.30e-01;
Mismatches 0;
7;
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(IN BETA-FORM).
7FD CRC32;
                                                                                                                                                                                                                                                                                                SIGNAL.
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                                                    CRC32;
۲.
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                                                                                                      SIMILARITY).
SIMILARITY).
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SIMILARITY)
Length 190
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                          GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HEPARIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAMMALIA;
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NHAA_RHOER
P13448;
01-.7
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01-NOV-1991 (REL. 20, LAS'
01-NOV-1991 (REL. 20, LAS'
COLD-REGULATED PROTEIN 2
HORDEUM VULGARE (BARLEY).
EUKARYOTA; PLANTA; EMBRYO
CYPERALES; GRAMINEAE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1990
01-AUG-1991
15-JUL-1998
SEQUENCE OF 1-187 FROM N.A.
STRAIN-BREVIBACTERIUM SP. / STRAIN R3
MEDLINE; 91072222.
MAYAUX J.-F., CERBELAUD E., SOUBRIER
J. BACTERIOL. 172:6764-6773(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-N-774;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
PIR; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-CV. GEORGIE;
CATTYVELLI L., BARTELS D.;
PLANT PHYSIOL. 93:1504-1510(1990).
PLANT PHYSIOL. 93:1504-1510(1990).
PLANT PHYSIOL. P3:1504-1510(1990).
PART PART P4:1504-1510(1990).
PART P4:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CR2_HORVU
P23252;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
                                                                                                                                               BIGEY F., CHEBROU H.,
SUBMITTED (MAR-1995)
                                                                                                                                                                                                STRAIN-ACV2;
                                                                                                                                                                                                                                                                           MEDLINE; 91159474.
HASHIMOTO Y., NISHIYAMA M., IKEHATA O., HORINOUCHI BIOCHIM. BIOPHYS. ACTA 1088:225-233(1991).
                                                                                                                                                                                                                                                                                                                                                STRAIN-N-77
                                                                                                                                                                                                                                                                                                                                                                                                                          EUR. J. BIOCHEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE; 89276338
IKEHATA O., NISHI
                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RHODOCOCCUS
PROKARYOTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NTHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NITRILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116 RCRCRRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RCRCRRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B45512; B45512.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CECRPKK 127
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Similarity 100.0%;
7; Conservative
                                                                                                                                                                                                                          FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             116
202 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (REL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    NISHIYAMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ERYTHROPOLIS FIRMICUTES; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
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                                                                                                                                                                                                                          N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                             IYAMA M., HORINOUCHI
181:563-570(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13, CREATED)
19, LAST SEQUENCE UPDATE)
36, LAST ANNOTATION UPDATE)
SUBUNIT ALPHA (EC 4.2.1.84)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
21753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBRYOPHYTA; ANGIOSPERMAE;
                                                                                                                                                  ö
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LAST SEQUENCE UI
LAST ANNOTATION
                                                                                                                                                  ARNAUD A., GALZY P.
TO EMBL/GENBANK/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PARTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTINOMYCETALES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FRAGMENT)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 7;
Pred. No.
0; Mism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 3.30e-01;
0; Mismatches 0;
                                                                          STRAIN R312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ARG-RICH.
BC9A9416 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UPDATE)
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[1]
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                            FAUCHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BEPPU
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                                                                                                                                                  DATA
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                            PETRE
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2. STRUCTURE 5:691-699(1997).

2. CIPTURCTION: UNHASE CATALYZES THE HYDRATION OF VARIOUS NITRILE

C. COMPOUNDS TO THE CORRESPONDING AMIDES. INDUSTRIAL PRODUCTION OF

ACRYLAMIDE IS NOW BEING DEVELOPED USING SOME OF THESE ENZYMES.

C. --- CATALYTIC ACTIVITY: AN ALIPHATIC AMIDE - A NITRILE + H(2)O.

C. --- CATALYTIC ACTIVITY: AN ALIPHATIC AMIDE - A NITRILE + H(2)O.

C. --- CATALYTIC TO OTHER DIONS.

C. --- SUBJUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN.

C. --- SUBJUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN.

C. --- SIMILARITY: TO OTHER NITRILE HYDRATASES SUBJUNIT ALPHA.

BREAL: X14668; G46410; --

DR EMBL: X54074; G46412; --

DR EMBL: M60264; G144092; --

DR EMBL: M60264; G144092; --

DR PIR: S04472; S04472.

PIR: S04472; S04472.
                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [5]

SEQUENCE OF 1-19.

STRAIN-N-774;

MEDLINE; 89153549.

ENDO T., WATANABE I.;

FEBS LETT. 243:61-64(1989).
                                                                                                                                                                                                                                                           VEGF_MOUSE STANDARD; PRT; 214 AA.
000731;
01-APR-1993 (REL. 25, CREATED)
01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INIT_MET
METAL
METAL
MEDLINE; 96216498.
SHIMA D.T., KUROKI M., DEUTSCH U.,
J. BIOL. CHEM. 271.3877-3883(1996).
-!- FUNCTION: GROWTH FACTOR ACTIVE
                                                                       SEQUENCE FROM N.A. (VEGF-1).

MEDLINE; 92355593.

CLAFFEY K. P., WILKISON W.O., SPIEGELMAN B.M.;

J., BIOL. CHEM. 267:16317-16322(1992).
                                                                                                                                    MEDLINE; 92274860.
BREIER G., ALBRECHT U., STERRER S.,
DEVELOPMENT 114:521-532(1992).
                                              SEQUENCE OF 1-3 FROM N.A.
                                                                                                                                                                                                EUTHERIA; RODENTIA.
                                                                                                                                                                                                                    VEGF.
MUS MUSCULUS (MOUSE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 97341231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-R31
                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                              EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                   PERMEABILITY FACTOR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY
                                                                                                                                                                                                                                                                                                                                                                                          13 PAQAPVS
                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 3.28;
Local Similarity 100.08;
                                                                                                                                                                                                                                                                                                                                                                           17 PAQAPVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IRON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-APR-98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               206
                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                     19
                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3D-STRUCTURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
112
113
114
117
19
22865
                                                                                                                                                                                                             CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                   (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (2.65 ANGSTROMS).
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 7;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IRON.
IRON.
IRON.
IRON.
P -> A (IN REF. 1).
S -> T (IN REF. 4).
S -> T (IN REF. 4).
                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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 IN ANGIOGENESIS,
                       ନ୍ଧ
                                                                                                                                                 RISAU
                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Le
3.30e-01
                        Y., ADAMIS A.P., D'AMORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 206;
                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
  AND
  ENDOTHELIAL
                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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Best Local (
                                                                                                                                                                PERMEABILITY FACTOR) (
VEGF OR VEGFA.
HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CH
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
VARSPLIC
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- TISSUE SPECIFICITY: IN DEVELOPING EMBRYOS, EXPRESSED MAINLY IN THE CHOROID PLEXUS, PARAVENTRICULAR NEUROEPTHELIUM, PLACENTA AND KIDNEY GLOMERULI. ALSO FOUND IN BRONCHIAL EPITHELIUM, ADRENAL GLAND AND IN SEMINIFEROUS TUBULES OF TESTIS. HIGH EXPRESSION OF VEGF CONTINUES IN KIDNEY GLOMERULI AND CHOROID PLEXUS IN ADULTS:
-!- ALTERNATIVE PRODUCTS: THREE FORMS (VEGF-1, VEGF-2 AND VEGF-3) ARE. PRODUCED AS A RESULT OF ALTERNATIVE SPLICING OF THE SAME GENE. HILL LONGEST FORM (VEGF-3, SHOWN HERE) CONTAINS A BASIC INSERT LINKEL, TO CELL-ASSOCIATION/HEPARIN-BINDING.
-!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS. EMBL; S38083; G249859; -.
EMBL; S38003; G249859; -.
                                                                                                                                                                                                                01-APR-1990 (REL. 14, CREATED)
01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR
PERMEABILITY FACTOR) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VARSPLIC CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MITOGEN;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>: :</del>
                                                                                                                                                                                                                                                                                   VEGF_HUMAN
P15692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:10317
PROSITE; PS002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>-</del>
                                    KECK P.J., HAUSER S.D., KRIVI G., CONNOLLY D.T.;
                                                             SEQUENCE FROM N.A., MEDLINE; 90069609.
                                                                                                 SEQUENCE FROM N.A.
MEDLINE; 90069608.
LEUNG D.W., CACHIANES G., K
SEQUENCE FROM N.A
                       SCIENCE 246:1309-1312(1989)
                                                                                                                                                                                                                                                                                                                                                                           127 CECRPKK 133
                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AND VASCULAR PERMEDBILITY.
SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
SUBCELLULAR LOCATION: VEGF-1 AND VEGF-2 ARE SECRETED WHILST VEGF-3 REMAINS CELL-SURFACE ASSOCIATED UNLESS RELEASED BY
                                                                                                                                                                                                                                                                                                                                                    CECRPKK
                                                                                                                                                                                                                                                                                                                                                                                                                3.2%;
Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS00249; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27
51
82
86
76
100
140
                                                                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; VEGF
                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FACTOR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       214
93
127
129
129
100
140
140
164
118
                                                                         AND
                                                                                                                                                                             CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          25283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.
GLYCOPROTEIN; ALTERNATIVE SPLICING; SIGNAL.
BY SIMILARITY.
VASCULAR ENDOTHELIAL GROWTH FACTOR.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                         PARTIAL SEQUENCE
                                                                                                               KUANG W.-J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ž
                                                                                                                                                                                                                                                                                                                                                                                                    Score 7;
Pred. No.
0; Misma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MISSING
MISSING
GE -> ER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             × -> ×
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                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          403318AF
                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                SANZO K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  V (IN VEGF-1).

NG (IN VEGF-1).

NG (IN VEGF-2).

ER (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       띥
                                                                                                                                                                                                                                                                                                 215
                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Lo
                                                                                                               GOEDDEL D.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC32;
                                                                                                                                                                                                                                                                                                 ጅ
                                                WARREN
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 214;
                                                                                                                                                                                                                                 (VEGF) (VASCULAR
                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                T.,
                                                                                                                FERRARA N.;
                                                FEDER J.,
                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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CC -!- ALTERNATIVE PRODUCTS: FOUR FORMS OF VEGF ARE PRODUCED BY
ALTERNATIVE SPLICING OF THE SAME GENE (VEGF-121, VEGF-165,
CC VEGF-189 AND VEGF-213).
CC VEGF-189 AND VEGF-213).
CC -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC PMBL; M63977; G181971; -.
CC EMBL; M63978; G340215; -.
CC EMBL; M63978; G340215; -.
CN EMBL; M63971; G340215; JOINED.
CN EMBL; M63972; G340215; JOINED.
CN EMBL; M63973; G340215; JOINED.
CN EMBL; M63974; G340215; JOINED.
CN EMBL; M63975; G340215; JOINED.
CN EMBL; M63976; G340215; JOINED.
CN EMBL; M63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE: 98298440.

FAIRBROTHER W.J., CHAMPE M.A., CHRISTINGER H.W., KEY STAROVASNIK M.A.;

STRUCTURE 6:637-648(1998).

-i- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS,

CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               + +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FAIRBROTHER W.J., CHAMPE M.A., CHRISTINGER H.W., KEYT B.A., STAROVASNIK M.A.; PROTEIN SCI. 6:2250-2260(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE: 98035455.
MULLER Y.A., CHRISTINGER H.W.,
STRUCTURE 5:1325-1338(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 97352774.
MULLER Y.A., LI B.,
DE VOS A.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE; 93145946.
FIEBICH B.L., JABGER B., SCHOELLMANN C., WEINDEL KOCHS G., MARME D., HUG H., WEICH H.A.;
EUR. J. BIOCHEM. 211:19-26(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 90062112.
CONNOLLY D.T., OLAN
SIEGEL N., HAYMORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRUCTURE BY NMR OF 137-215.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRUCTURE
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MEDLINE; 92231879.
WEINDEL K., MARME D.,
BIOCHEM. BIOPHYS. RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE; 91268072.
TISCHER E., MITCHELL R., HARTMAN T.,
FIDDES J.C., ABRAHAM J.A.;
J., BIOL. CHEM. 266:11947-11954(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 27-41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROC. NATL. ACAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -RAY CRYSTALLOGRAPHY (1.93 ANGSTROMS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF 34-135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PERMEABILITY.
SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS
TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E BY NMR OF 34-135
97477915.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OLANDER J.V., HEUVELMAN D., MORE B.L., LEIMGRÜBER R., FE 264:20017-20024(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHRISTINGER H.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WEICH H.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A. 94:7192-7197(1997).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183:1167-1174(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SILVA M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WELLS J.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엵
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GOSPODAROWICZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , AND ENDOTHELIAL AND VASCULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WILTING
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Best Local
                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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DISULFID
DISULFID
DISULFID
CARBOHYD
VARSPLIC
VARSPLIC
VARSPLIC
SEQUENCE
                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EFA4_MOUSE
008542;
                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE; 97060319.
FLENNIKEN A.M., GALE N.W., Y
DEV. BIOL. 179:382-401(1996)
-i- SUBCELLULAR LOCATION: AT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOY-1997 (REL. 35, CREATED)
01-NOY-1997 (REL. 35, LAST SEQUENCE UPDATE)
01-NOY-1997 (REL. 35, LAST ANNOTATION UPDATE)
EPHRIM-A4 PRECURSOR (EPH-RELATED RECEPTOR TYROSINE
                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                         MGD; MGI:106643; EFNA4.
PROSITE; PS01299; EPHRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUS MUSCULUS (MOUSE)
EUKARYOTA; METAZOA; (
                                                                                                                                        SEQUENCE
                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                           SIMILARITY).
-!- SIMILARITY: BELONGS
EMBL; U90663; G1906017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EFNA4 OR EPLG4 OR LERK4 OR EPL4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00249;
MITOGEN; GROWTH FA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (LERK-4).
                                  13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85 GLECVPT
 ø
                     RPPAPPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JQ1464;
S17348;
RPPAPPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1VGH; 08-APR-98.
2VGH; 08-APR-98.
1VPF; 08-APR-98.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2VPF; PRELIMINARY
                                                                                  3.28;
Similarity 100.08;
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                                                                    Conservative
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IOR; SIGNAL.
POTENTIAL.
24 EPHRIN-A4.
51 POTENTIAL.
116 POTENTIAL.
61 CELL ATTACHMENT SITE (POTENTIAL).
CBS08052 CRC32;

DB 1; Length 224;
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GLYCOPROTEIN; ALTERNATIVE
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Pred.
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MISSING (IN VEGF-165).
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18547894 CRC32;
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Best Local Similarity 100.0%;
Matches 7; Conservative
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                                                                     SEQUENCE OF 150-203 FROM N.A.
MEDLINE; 92310993.

DENNY P., SWIFT S., BRAND N., DABHADE N., BARTON P., ASHWORTH .

NUCLEIC ACIDS RES. 20:2887-2887(1992).

-!- SUBCELLULAR LOCATION: NUCLEAR.

-!- SIMILARITY: CONTAINS 1 HMG BOX.

-!- CAUTION: WAS CALLED SOX-9 BY REF.2.
EMBL; X5165; G530020; -.
EMBL; X5165; G938234; -.
EMBL; X521483; S21443.

PIR; S21242; S22942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VENTER J.C.;
SCIENCE 269-496-512(1995).
SCIENCE 269-496-512(1995).
-!- SUBJECTATION: PERIPLASMIC (PROBABLE).
-!- SIMILARITY: BELONGS TO THE BACTERIAL EXTRACELLULAR SOLUTE-BINDING PROTEIN FAMILY 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOX3_HUMAN STANDARD: PRT; 443 AA. P41225; P35714; O1-JUN-1994 (REL. 29, CREATED) O1-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE) 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE) TRANSCRIPTION FACTOR SOX-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-RD / KW20;
MEDLINE; 95350630.
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PROKARYOTA; GRACILICUTES; SCOTOBACTERIA; FACULTATIVELY ANAEROBIC RODS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HI0146
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01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
HYPOTHETICAL PROTEIN HIO146 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

MEDLINE; 94134672.

STEVANOVIC M., LOVELL-BADGE R., COL.

HUM. MOL. GENET. 2:2013-2018(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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329 AA;
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36513 MW;
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DNA-BINDING; NUCLEAR PROTEIN; TRANSCRIPTION REGULATION

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Tabular output not generated. MPsrch_pp protein - protein database search, using Smith-Waterman algorithm Thu Nov 26 00:08:55 1998: MasPar time 11.77 Seconds 685.760 Million cell updates/sec

Title: Description: Perfect Score: Sequence:

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Searched: 120441 seqs, 36531193 residues

Database: Post-processing: Minimum Match 0% Listing first 1000 summaries

Statistics: pir56 l:pir1 2:pir2 3:pir3 4:pir4 5:nr13d Mean 3.326; Variance 0.440; scale 7.555

Prd. No. is the number of results predicted by chance to have a score of the tesult being printed, and is derived by analysis of the total score distribution

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J. Bacteriol. (1990) 172:6764-6773
Purification, cloning, and primary structure of an enantiomer-selective amidase from Brevibacterium ap. strain politics.
Bill: structural evidence for genetic coupling with nitrile
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Journal Biochem, Biophys, Res. Coriep, T.; Fiddes, J.C.; Abraham,

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**Eitle Vascular endothelial growth factor: a new member of the

placeler-derived growth factor gene family.

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Science (1989) 246:1306-1309
Vascular endothelial growth factor is a secreted angiogenic
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**SERVICE CLAETRY K. P.; Wilkison, W.O.; Spiegelman, B.K.

**SOUTHAL Vacular endottellal growth factor Regulation by cell

**General referentiation and activated second messenger pathways*

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Anino acid and ORM, sequences of a vascular endothelial cell mitogen that is homologous to platelet derived growth
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Expression of vacular endothelial growth factor during 
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Rosenthal, R.A.: Megyesi, J.F.: Henzel, W.J.; Ferrara, N.: Pollman J. Groyth Eartors (1990) 4:53-59 Conditioned medium from mouse aercoma 180 cells contains Yascular endothelial growth factor.

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Tue Dec 1 13:40:06 1998

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RESULT 14
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                                                                                                                                                                                                                                                                                                                    NHase
carbon-oxygen lyase; hydro-lyase
flength 207 #molecular-weight 23116 #checksum 4579
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Biosci. Biotechnol. Biochem. (1993) 57:1323-1328
Characterization of nitrill hydratase genes cloned by DNA
screeing from Rhodococcus erythropolis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JN0705 stype complete nitrile hydratase (EC 4.2.1.84) alpha chain - Rhodococcus
                                                               4/72 etype complete
rile hydratase (Ec. 4.2.1.84) alpha chain - Rhodococcus sp.
symal_name Rhodococcus sp.
sep-1990 #sequence_revision 07-Sep-1990 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al_name Rhodococcus erythropolis
1-1994 #sequence_revision 14-Jul-1994 #text_change
Sep-1997
                                      A30463; $16606; $02070; $54105; $62095; $15071;
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Rehata, O.; Nishiyama, M.; Horinouchi, S.; Beppu, T. Nur. J. Blochem. (1989) 181:553-570 Filmary structure of fitthle hydratase deduced from the nucleotide sequence of a Rhodococcus species and its

Tue Dec 1 13:40:06 1998 US-09-033-662-2.zpr

*cross-references MUID:91159474
*accession \$15071

Page 31

SUMMARY **smolecule_type_DM.
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**sreadurs_Type_L-29:30,197-207 **slabel HAS
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Nishlyama, M. submitted to the EMBL Data Library, March 1989 \$16606.

protein 2-19;47-66;144-159 selabel IKE2

1-17,'A',19-207 selabel NIS CE 502070 hors ---

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Ouery Match 23%: Score 7; DB 2; Length 202; Best Local Similarity 100 0%; Pred. No. 9.456-01; Matches 7; Conservative 0; Missatches 0; Indels

9

Cattivelli, L.: Bartels, D.
Plant Physiol. (1990) 93:1504:1510
Molecular cloning and characterization of cold-regulated
genes in barley.
B45512

116 RCRCRRR 122

ACCESSIONS REFERENCE *authors *journal *title

ORGANISM DATE RESULT 12 ENTRY

B45312 - *type fragment cold-regulated protein 2 - barley (fragment) formal_name Hordeum vulgare *common_name barley 01-Jun 1993 *sequence_revision 30-Sep-1993 *text_change

Oy 121 CECRPKK 127

127 CECRPER 133

RESULT 15
ENTRY
TITLE
CONTAINS ORGANISM DATE

ACCESSIONS
REFERENCE
*authors
*journal
*title Breier, G.; Albrecht, U.; Sterrer, S.; Risau, W. Development (1991) 144:531-532 Expression of vascular endothelial growth factor during embryonic amplogenesis and endothelial cell differentiation. *formal_name Mus musculus *common_name house mouse 03-Feb-1994 *sequence_revision 03-Feb-1994 *text_change 09-Mar-1996 A44881 stype complete
vascular endothelial growth factor-2; vascular permeability
vascular endothelial growth factor-2; vascular permeability
factor 1; C44881; A60932; S52136

#accession C448b1 BR2 ##NOLecuLe_type_mR04, 209-214 ##1abel BR2 ##NOLecuLe_type_mR04, 209-214 ##1abel BR2 ##NOTE #

**molecule_type_DNA **residues 1.207 **label NT2 **expedidues treferences EMBLX\$4074; NID:946410; PID:946412 **experimental_source strain N-774 **experiment mistionoo, Y.; Mishiyama, M.; Ikehata, O.; Horinouchi, S.; Beppu, T. Jochim. Biophys. Acts. (1991) 1088:225-233 oning and characterisation of an anidace gene from Rhodococcus species N-774 and its expression in Escherichia

**Recession 5541UX
***Indicule_type DuA
***Indicule

EREKE \$54104 \$54104 F. Sentone \$54104 F. Sentone Bigey, F.; Chebrou, H.; Arnaud, A.; Galzy, P. sauthors aubhitted to the EMBL Data Library, March 1995 sedescription Cloning, sequencing of the modified nitrile hydratase (

gene

protein 2-19,'T' **label END

wauthors Endo, T.; Watanabe, I. #journal. FEBS Lett. (1989) 243:51-64 Wille Nitrile hydratase of Rhodococcus sp. N-774. Purification and feroms-references MUD:89153549 eaccession 802070

Cross-reference

REFERENCE *authors A60932 Clauss, M.; Gerlach, M.; Gerlach, H.; Brett, J.; Wang, F.; Familletti, P.C.; Pan, Y.C.E.; Olander, J.V.; Connolly,

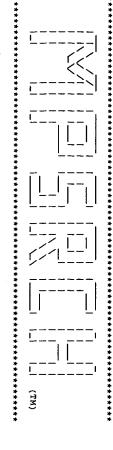
Page 7

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Release 3.1A John F. Collins, Biocomputing Research Copyright (c) 1993-1998 University of Edinburgh, U. Distribution rights by Oxford Molecular Ltd . : Unit.

Run on: MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Mon Nov 30 13:08:17 1998; MasPar time 7.61 Seconds 469.670 Million cell updates/sec

Tabular output not generated.

Title: Description: Perfect Score: Sequence: >US-09-033-662-2 (1-221) from US09033662.pep

Scoring table: TABLE unitprotable Gap 60

Searched: 131922 seqs, 16180660 residues

Post-processing: Minimum Match 0% Listing first 100 summaries

Database a-geneseq32
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
1:part1 2:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29

Statistics: Mean 2.708; Variance 0.678; scale 3.995

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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W07611;
01-SEP-1997 (first entry)
Human vascular endothelial growth factor; hVEGF3; angiogenesis;
Humour; inflammation; rheumatoid arthritis; diabetic retinopathy;
racriasis; bone; periodontium; ligament; antagonist.
W04831;
W04831;
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94
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This sequence is that of human vascular endothelial growth factor 3 (VEGF3). The growth factor can be used to stimulate angiogenesis and wound healing, and to promote vascular tissue repair. It can also be used to induce the growth of damaged bone, periodontium or ligament tissue VEGF3 antagonists can be used to inhibit tumour growth, or to treat diabetic retinopathy, inflammation, rheumatoid arthritis or psoriasis. VEGF3 is structurally related to the PDGF/VEGF family and it includes the conserved signature motif for the family (see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9639421-A1.
12-DEC-1996.
06-JUN-1995; U
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WPI; 97-043056/04.
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/note= "conserved PXCVXXXRCXGCCN motif"
                Protein;
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D 06-SEP-1996; U02957.

P 01-MAR-1995; U3-397651.

PR 01-MAR-1995; U3-397651.

PR 06-DEC-1995; U3-569063.

PA (LUDM) LUDWIG INST CANCER RES.

PA (UYHE-) UNIV HELSINKI LICENSING LTD OY.

PA (11talo K, Eriksson U, Olofsson B, Pajusola K;

PI Alitalo K, Eriksson U, Olofsson B, Pajusola K;

PI WPI; 96-412582/41.

DR WPJ; 96-42582/41.

DR WPSDB; T37915.

PT Vascular endothelial growth factor VEGF-B proteins - useful recommendation of the state of the control of the co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PT accelerate anglogenesis in wound healing, also related nucleic acid
PT and antibodies for cancer diagnosis
PS Claim 18; Page 62; 107pp; English.
CC W04824-W04831 represent the vascular endothelial growth factor (VEGF)
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
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CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial in the context in which is
CC sometimes referred to as vascular permeability factor (VPF). VEGF has
CC is found. VEGF is also a glycosylated cationic context in which is
CC contributes to induction of angiogenesis in vivo by promoting endothelial
CC is found. VEGF is a potent endothelial cell mitogen, and directly
CC contributes to induction of angiogenesis in vivo by promoting endothelial
CC cell growth during normal embryonic development, wound healing, and
CC cell growth during normal embryonic development, wound healing, and
CC cell growth during normal embryonic development, wound healing, and
CC cell growth during normal embryonic development, wound healing, and
CC cell growth during normal embryonic development, wound healing, and
CC cell growth during normal embryonic development, wound healing, and
CC and expressed in tissues differently to VEGF. The proteins can therefore
CC use of the cocclerate angiogenesis in wound healing. Antibodies against
CC the proteins can be used for inhibiting angiogenesis. The antibodies can
CC can also be used to detect VEGF-B coding sequences. Quantification of
CC vEGF-B in cancer blopsy specimens may be useful as an indicator of
CC vEGF-B in cancer blopsy specimens may be useful as an indicator of
CC endstructured customers.
CC contributes the vEGF coding sequences, this is
CC especially useful in retarding VEGF expression in tumo
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Vascular endothelial growth factor-B186.
Vascular endothelial growth factor; VPF
Endothelial cell; proliferation; vascular endothelial growth factor; VPF
VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration;
Vascular permeability factor; cell mitogen; angiogenesis; cell growth;
embryonic development; wound healing; tissue reorganisation; antibody;
cancer; metastatic risk; tumour cell; mouse.
                                                                                                                   78
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                                                                                                                   standard; Protein;
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                         Location/Qualifiers
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                                                                factor-like protein SON
factor; VEGF; VEGF165;
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W00727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human vascular endothelial growth factor (VEGF)-like polypeptide (W00725) is capable inducing the proliferation of vascular endothelial cells, of interacting with flt-l/fkl-1 receptors, and of inducing cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. It shows 33.3% identity with human VEGF (see also W00724). Splice variants (W00726-28) of SOM175 have also been identified. Recombinant SOM175 can be produced in host cells transformed with vectors carrying SOM175 CDNA (see also T33610). It is useful for inducing astroglial proliferation and for promoting neural survival and/or proliferation. Sequence 207 AA;
                                                                                                                                                                                                                                                                                                                                                                 06-SEP-1996;
22-FEB-1996;
02-MAR-1995;
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22-FEB-1996;
02-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-NOV-1996 (first entry)
Vascular endothelial growth factor-like protein SOM175-e6+e7.
Vascular endothelial growth factor; VEGF; SOM175-e6+e7; neuron; astroglial proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
(AMRA-) AMRAD OPERATIONS PTY LTD.
Grimmond S, Hayward NK, Larsson C,
Claim 13; Page 46; 113pp; English.

Splice variants, (W00726-28) of the human vascular endothelial factor-like polypeptide sow175 (see also W00725) are products CDNA clones (see also T33611-13) respectively lacking exon 6,
                                                                                                                             New growth factor related to vascular endothelial growth factor useful for inducing astroglial proliferation and promoting neuronal
                                                                                                                                                                                                                                                                                                             20-NOV-1995;
22-DEC-1995;
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N-PSDB; T33610.
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                                                                                                                                                                                      N-PSDB; T33612
                                                                                                                                                                                                         WPI; 96-412774/41.
                                                                                                                                                                                                                                       Weber
                                                                                                                                                                                                                                                               Grimmond S,
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Similarity 100.0%;
149; Conservative
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AU-006647.
AU-007274.
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Larsson
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Pred. No. 3.09e-233;
0; Mismatches 0;
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R 22-DEC-1995; AU-006647.
R 22-DEC-1995; AU-007274.
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Best Local S
Matches 11
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                                                                                                                                                                                                                                                                                                                                     Claim 12; Page 42-43; 113pp; English. Splice variants (W00726-28) of the human vascular endothelial growth factor-like polypeptide SOM175 (see also W00725) are products of cDNA clones (see also T33611-13) respectively lacking exon 6, exons 6+7, and exon 4 of the SOM175 gene (see also T33610). They show at least 1 of the properties of SOM175 including the ability to induce proliferation of vascular endothelial cells, to interact with fit-1/fik-1 receptors, and to induce cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. Recombinant SOM175 proteins can be used to induce astroglial proliferation and to promote neural survival and/or proliferation. Sequence 188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6+7, and exon 4 of the SOM175 gene (see also T33610). They show at least 1 of the properties of SOM175 including the ability to induce proliferation of vascular endothelial cells, to interact with flt-1/fik-1 receptors, and to induce cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. Recombinant SOM175 proteins can be used to induce astroglial proliferation and to promote neural survival and/or proliferation. Sequence 143 AA;
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Vascular endothelial grow
astroglial proliferation.
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                     cggccpddglecvptgqhqvrmqilmirypssqlgemsleehsqcecrpkkkdsavkpd
                                                                                                                                       paqapvsqpdapghqrkvvswidvytratcqprevvvpltvelmgtvakqlvpscvtvqr 77
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                                                                                                            PAQAPVSQPDAPGHQRKVVSWIDVYTRATCQPREVVVPLTVELMGTVAKQLVPSCVTVQR
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l Similarity 100.0%;
120; Conservative
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Similarity 100.0%;
119; Conservative
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Pred.
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Pred. No. 7.
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factor; VEGF; SOM175-e6; neuron;
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d. No. 3.81e-182;
Mismatches 0;
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7.62e-184;
ches 0;
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PT and antibodies for cancer diagnosis
Claim 18; Page 59; 107pp; English.
CC W04824-W04831 represent the vascular endothelial growth factor (VEGF)
CC W04824-W04831 represent the vascular endothelial or mesodermal cell
CC proliferation. VEGF is also a glycosylated cationic diner, and is
CC contributes referred to as vascular permeability factor (VPF). VEGF has
CC diverse effects, depending on the specific biological context in which it
CC is found. VEGF is a potent endothelial cell mitogen, and directly
CC contributes to induction of angiogenesis in vivo by promoting endothelial
CC tissue regeneration/reorganisation. The VEGF proteins of the invention
CC share the angiogenic and other properties of VEGF, but are distributed
CC and expressed in tissues differently to VEGF. The proteins can therefore
CC be used to accelerate angiogenesis in wound healing. Antibodies against
CC complementary to the coding sequences for the proteins. The antibodies can
CC complementary to the coding sequences for the proteins of the invention
CC can also be used for enabliting angiogenesis. The antibodies can
CC complementary to the coding sequences for the proteins of the invention
CC can also be used to detect VEGF-B coding sequences. Owantification of
CC weff-B in cancer biopsy specimens may be useful as an indicator of
CC metastatic risk. VEGF-B expression in a cell can be retarded using
CC especially useful in retarding VEGF expression in tumour cells.
SQ Sequence 188 AA;
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06-SEP-1996; U02957.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
                                                                                                                                                        30-NOV-1996 (first entry)
Vascular endothelial growth factor-like protein SOM175-e4.
Vascular endothelial growth factor; VEGF; SOM175-e4; neuro
astroglial proliferation.
                                                                                                                                                                                                                                                                                             W00728;
WO9627007-AJ
                                                                                                                          Homo sapiens
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(UYHE-) UNIV HELSINKI LICENSING LTD OY.
Alitalo K, Eriksson U, Olofsson B, P
MPI; 96-412582/41.
N-PSDB; T37913
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Fibrosarcoma vascular endothelial growth factor-B167.
Fibrosarcoma vascular endothelial growth factor; VPF
Endothelial cell; proliferation; vascular endothelial growth factor; VPF
VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration;
vascular permeability factor; cell mitogen; angiogenesis; cell growth;
embryonic development; wound healing; tissue reorganisation; antibody;
cancer; metastatic risk; tumour cell; mouse.
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W04829
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                                                                                                                                                                                                                                                                                                                               standard;
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Best Local S
Matches 8
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01-MAR-1995; US-397651.
06-JUN-1995; US-369427.
06-DEC-1995; US-369063.
(LUDW-) LUDWIG INST CANCER RES.
(LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD OY.
Alltalo K, Eriksson U, Olofsson B, Pajusola K;
WPI; 96-412582/41.
N-PSDB; T37909.
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22-FEB-1996; AU0094.
22-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
(AMRA-) AMRAD OPERATIONS P
GILLMOON S, HAYWARD NK,
Vascular endothelial growth factor VEGF-B proteins - useful to accelerate angiogenesis in wound healing, also related nucleic acid and antibodies for cancer diagnosis claim 18; Bage 53-54; 107pp; English.

W04824-W04831 represent the vascular endothelial growth factor (VEGE) proteins of the invention, which promote endothelial or mesodermal (C) proliferation. VEGF is also a glycosylated cationic dimer, and is sometimes referred to as vascular permeability factor (VPF). VEGE has alverse effects, depending on the specific biological context in which is found. VEGF is a potent endothelial cell mitogen, and directly contributes to induction of anglogenesis in vivo by promoting endothelial cell growth during normal embryonic development, wound healing, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vascular endothelial growth factor fragment #1.

Endothelial cell; proliferation; vascular endothelial growth factor; VFF; VEGF; endothelium; mesodermal cell; cattonic dimer; tissue regeneration; vascular permeability factor; cell mitogen; angiogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  splice variants (W00726-28) of the human vascular endothelial growth factor-like polypeptide SOM175 (see also W0725) are products of CDNA clones (see also T33611-13) respectively lacking exon 6, exons 6+7, and exon 4 of the SOM175 gene (see also T33610). They show at least 1 of the properties of SOM175 including the ability to induce proliferation of vascular endothelial cells, to interact with fit-1/fik-1 receptors, and to induce cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. Recombinant SOM175 proteins can be used to induce astroglial proliferation and to promote neural survival and/or proliferation.
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28-APR-1997
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N-PSDB; T33613.
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Similarity 100.0%;
83; Conservative
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Pred. No.
0; Misma
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3.21e-121;
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tissue regeneration/reorganisation. The VEGF proteins of the invention share the angiogenic and other properties of VEGF, but are distributed and expressed in tissues differently to VEGF. The proteins can therefore be used to accelerate angiogenesis in wound healing. Antibodies against the proteins can be used for inhibiting angiogenesis. The antibodies can also be used diagnostically to quantitatively detect VEGF-B. Primers complementary to the coding sequences for the proteins of the invention can also be used to detect VEGF-B coding sequences. Quantification of VEGF-B in cancer biopsy specimens may be useful as an indicator of metastatic risk. VEGF-B expression in a cell can be retarded using antisense sequences direct against the VEGF coding sequences, this is especially useful in retarding VEGF expression in tumour cells.
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Matches
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01-MAR-1995; US-397651.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD OY.
Alitalo K, Eriksson U, Olofsson B, Paju WPI; 96-412582/41.
                                                                                                                                                                                                                                 Vascular endothelial growth factor VEGF-B proteins - useful to accelerate angiogenesis in wound healing, also related nucleic and antibodies for cancer diagnosis
                                                                                                                                                                                                                                                                                                                                                                                            Vascular endothelial growth factor-B112.

Endothelial cell; proliferation; vascular endothelial growth factor; VPF; Endothelial mesodermal cell; cationic dimer; tissue regeneration; VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; anglogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; mouse.
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28-APR-1997
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Local Similarity 100.0%;
nes 39; Conservative
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Pred. No. 4.35e-48;
0; Mismatches 0
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Query Match 17.6%; Best Local Similarity 100.0%;

Score 39; DB 21; Pred. No. 4.35e-48

DB 21;

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CLaim 18; Page 55-56; 107pp; English.

CC W04824-W04831 represent the vascular endothelial growth factor (VEGF)

CC proteins of the invention, which promote endothelial or mesodermal cell

CC sometimes referred to as vascular permeability factor (VPF). VEGF has

CC diverse effects, depending on the specific biological context in which it

CC is found. VEGF is a potent endothelial cell mitogen, and directly

CC contributes to induction of anglogenesis in vivo by promoting endothelial

CC cell growth during normal embryonic development, wound healing, and

CC tissue regeneration/teorganisation. The VEGF proteins of the invention

CC share the anglogenic and other properties of VEGF, but are distributed

CC and expressed in tissues differently to VEGF but are distributed

CC and expressed in tissues differently to VEGF. The proteins can therefore

CC be used to accelerate anglogenesis in wound healing. Antibodies can loo be used diagnostically to quantitatively detect VEGF B. Primers

CC complementary to the coding sequences for the proteins of the invention

CC VEGF B in cancer blopsy specimens may be useful as an indicator of

CC VEGF B in cancer blopsy specimens may be useful as an indicator of

CC venture of the proteins of the invention of the coding sequences of the proteins of the sequences, this is

CC centure and the proteins of the proteins of the invention of

CC VEGF B in cancer blopsy specimens may be useful as an indicator of

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W09626736-A1.
06-SEP-1996.
01-MAR-1995; U02957.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
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                                                               Murine VRF167.
VRF; vascular endothelial growth factor; VEGF; SOM175; neuron; astroglial proliferation.
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WPI; 96-412582/41.
N-PSDB; T37910.
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30-NOV-1996
                                                                                                                                                                                                                                                  W00864 standard;
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(UYHE-) UNIV HELSINKI LICENSING LTD OY
Alltalo K, Eriksson U, Olofsson B,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 17.6%;
Similarity 100.0%;
39; Conservative
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   Location/Qualifiers
                                                                                                                                                                                                                                                  Protein; 188
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Pred. No. 4.35e-48;
0; Mismatches 0;
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01-MAR-1996; U7-197651.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD OY.
Alitalo K, Eriksson U, Olofsson B, Paj
WPI; 96-412582/41.
N-PSDB; T37914
and antibodies for caucer transformed and formed an
                                                                                                                                                                                                                                                                                                       Vascular endothelial growth factor VEGF-B proteins - useful to accelerate angiogenesis in wound healing, also related nucleic and antibodies for cancer diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vascular endothelial growth factor-B186. 
Endothelial cell; proliferation; vascular endothelial growth factor; VPF; 
VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; 
vascular permeability factor; cell mitogen; anglogenesis; cell growth; 
embryonic development; wound healing; tissue reorganisation; antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 5; Fig 9; 113pp; English.

VRF167 (W00863) is the murine homologue of an alternatively spliced variant (W00726) of human vascular endothelial growth factor-like variant (W00726) of human vascular endothelial growth factor-like polypeptide SOM175 (W00725), a protein capable of inducing astroglia proliferation and of promotting neural survival and/or proliferation. Its amino acid sequence was deduced from a CDNA clone (T13810) isolated from a new-born mouse barain cDNA library. VRF167 Shows 85% identity and 92% similarity to its human counterpart. It lacks 101 amino acids found in VRF186 (W00863), the murine homologue of SOM175, owing to a deletion of exon 6 during splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancer; metastatic risk; tumour cell; mouse.
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20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KQLVPSCVTVQRCGGCCPDDGLECVPTGQHQVRMQILMI 103
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39; Conservative
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d. No. 4.35e-48;
Mismatches 0;
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W0482/;
28-APR-1997 (first entry)
28-APR-1997 (first entry)
Heart vascular endothelial growth factor-B174.
Heart vascular endothelial growth factor; VPF
Endothelial cell; proliferation; vascular endothelial growth factor; VPF
VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration;
VEGF; endothelium; mesodermal cell mitogen; anglogenesis; cell growth;

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02-MAR-1995; AU-001457.

20-NOV-1995; AU-006647.

22-DEC-1995; AU-007274.

(AMRA-) AMRAD OPERATIONS P

Grimmond S, Hayward NK,
                                                                                                                                                                                                                                                        Example 5; Fig 9; 113pp; English.

VRF186 (W00863) is the murine homologue of human vascular endothelial vrF186 (W00863) is the murine homologue of human vascular endothelial vrF186 (W00725), a protein capable of inducing astroglial proliferation and of promoting neural survival and/or proliferation. Its amino acid sequence was deduced from a cDNA clone (T13809) isolated from a new-born mouse brain cDNA library. An alternatively spliced variant, VRF169 (W00864), was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and expressed in tissues differently to VEGF. The proteins can therefore be used to accelerate angiogenesis in wound healing. Antibodies against the proteins can be used for inhibiting angiogenesis. The antibodies can also be used diagnostically to quantitatively detect VEGF-B. Primers complementary to the coding sequences for the proteins of the invention can also be used to detect VEGF-B coding sequences. Quantification of VEGF-B in cancer biopsy specimens may be useful as an indicator of metastatic risk. VEGF-B expression in a cell can be retarded using antisense sequences direct against the VEGF coding sequences, this is especially useful in retarding VEGF expression in tumour cells. Sequence 207 AA;
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VRF; vascular endothelial
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Pred. No. 4.35e-48;
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Procedure of the large So-57; 107pp; English.

CC VW04824-W04831 represent the vascular endothelial growth factor (VEGF)

CC W04824-W04831 represent the vascular endothelial or mesodermal cell

CC proliferation. VEGF is also a glycosylated cationic dimer, and is

CC growthimes referred to as vascular permeability factor (VPF). VEGF has

CC diverse effects, depending on the specific biological context in which it

CC is found. VEGF is a potent endothelial cell mitogen, and directly

CC contributes to induction of angiogenesis in vivo by promoting endothelial

CC tissue regeneration/reorganisation. The VEGF proteins of the invention

CC share the angiogenic and other properties of VEGF, but are distributed

CC and expressed in tissues differently to VEGF. The proteins can therefore

CC be used to accelerate angiogenesis in wound healing. Antibodies against

CC complementary to the coding sequences for the proteins can therefore

CC complementary to the coding sequences for the proteins of the invention

CC complementary to the coding sequences for the proteins of the invention

CC complementary to the coding sequences for the proteins of the invention

CC complementary to the coding sequences for the proteins of the invention

CC complementary to the coding sequences. Quantification of

CC VEGF B in cancer biopsy specimens may be useful as an indicator of

CC metastatic risk. VEGF-B expression in a cell can be retarded using

CC especially useful in retarding VEGF expression in tumour cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
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Best Local Similarity 100.0%;
Matches 35; Conservative
                                                                                                                                   W09626736-A1.

06-SEP-1996.

01-MAR-1996; U02957.

01-MAR-1995; US-397651.

06-DEC-1995; US-469427.

06-DEC-1995; US-569063.

(LUDW-) LUDWIG INST CANCER RES.

(LUDW-) LUDWIG INST CANCER RES.

(LUDW-) UNIV HELSINKI LICENSING LTD OY.

Alitalo K, Eriksson U, Olofsson B, Pajusola K;

WPI; 96-412582/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W04833; standard; peptide; 23 AA. W04833; w04833; 30-APR-1997 (first entry)
30-APR-1997 (first entry)
N-terminal peptide of vascular endothelial growth factor-B. Endothelial cell; proliferation; vascular endothelial growth factor; VPF; VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; angiogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-SEP-1996.
01-MAR-1996; U02957.
01-MAR-1995; US-397651.
01-MAR-1995; US-469427.
06-DEC-1995; US-569063.
06-DEC-1995; US-569063.
01-MAR-1995; US-569063.
01-MAR-1995; US-569063.
01-MAR-1995; US-569063.
01-MAR-1995; US-569063.
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Mus musculus.
W09626736-Al.
Vascular endothelial growth factor VEGF-B accelerate angiogenesis in wound healing, and antibodies for cancer diagnosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66 kqlvpscvtvqrcggccpddglecvptgqhqvrmq 100
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Pred. No. 1.32e-41;
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                                                  proteins - useful to also related nucleic
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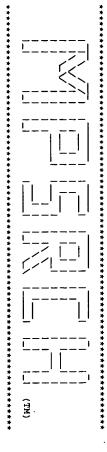
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CC This sequence represents the N-terminal peptide of a vascular endothelial CC growth factor (VEGF) protein of the invention (see W04824-W04831). This completes the N-terminal peptide of a vascular endothelial CC growth factor (VEGF) protein of the invention (see W04824-W04831). This cc sequence was coupled to keyhole limpet heamocyanin, to produce antibodies against human VEGF-B. VEGF is a glycosylated cationic dimer, which CC promotes endothelial or mesodermal cell proliferation, and is sometimes cc effects, depending on the specific biological context in which it is contributes to induction of angiogenesis in vivo by promoting endothelial cc lell growth during normal embryonic development, wound healing, and ct tissue regeneration/reorganisation. The VEGF proteins of the invention cc and expressed in tissues differently to VEGF. The proteins can therefore be used to accelerate angiogenesis in wound healing. Antibodies can also be used diagnostically to quantitatively detect VEGF-B. The antibodies can also be used to detect VEGF-B coding sequences. Opantification of VEGF-B in cancer biopsy specimens may be useful as an indicator of complementary to the coding sequences for the proteins of the invention cc can also be used to detect VEGF-B coding sequences. Quantification of VEGF-B in cancer biopsy specimens may be useful as an indicator of complementary to the coding sequences or the proteins of the invention of vegF-B in cancer biopsy specimens may be useful as an indicator of complementary to the coding sequences of the invention of coding sequences of the invention of vegF-B in cancer biopsy specimens may be useful as an indicator of complementary to the coding sequences coding sequences, this is sequences and the vegF-B coding sequences of the invention of coding sequences and the vegF-B coding sequences of the invention of coding sequences and the vegF-B coding sequences of the invention of coding sequences and the vegF-B coding sequences of the invention of coding sequences.
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Search completed: Mon Nov 30 13:09:07 1998 Job time : 50 secs.

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Release 3.1A John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1998 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

Run on: MPsrch_pp protein - protein database search, using Smith-Waterman algorithm Thu Nov 26 00:01:57 1998; MasPar time 4.69 Seconds 148.639 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: Sequence: >US-09-033-662-2 (69-82) from US09033662.pep 1 PSCVTVQRCGGCCP 14

Scoring table: PAM 150 Gap 11

Searched: 165420 seqs, 49795644 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

1:sp_archea 2:sp_bacteria 3:sp_fungi 4:sp_human 5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle 9:sp_phage 10:sp_plant 11:sp_rodent 12:sp_unclassified 13:sp_vertebrate 14:sp_virus

Statistics: Mean 23.748; Variance 38.778; scale 0.612

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

200876544321 20087654321 20087654321	Result
121 121 1221 1221 1221 1221 1221 1221	Score
100.0 100.0 100.0 100.0 80.2 80.2 80.2 80.2 76.9 75.2 75.2 75.2 75.2 75.2 75.2 75.2 75.2	Query Match
116 11 150 11 207 4 207 4 1183 11 1183 11 1210 6 210 6 221 14 232 14 232 14 232 14 158 11 144 13 158 11 158 13	Length DB
035485 1 0542881 1 0542881 1 063748 0 016528 0 029613 4 041283 4 041283 5 018843 5 018843 1 035251 1 070123 3 073682 3 073682 3 073682 063434	B ID
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TENASCIN-X.	CD4.2 PROTEIN.	HYPOTHETICAL 12.7 KD P	PUTATIVE TRANSCRIPTION	GLUTAMATE SYNTHASE (GL	RADICAL ACTIVATING PRO	FK506 POLYKETIDE SYNTH	SURFACE PROTEIN PRECUR	SURFACE PROTEIN.	SURFACE GLYCOPROTEIN S	KERATIN, HIGH-SULFUR M	KERATIN, HIGH-SULFUR M	CELL DIVISION CYCLE CO	F12F1.6.	W01F3.3.	YFJO PROTEIN.	F10D2.3 PROTEIN.	SIMILAR TO CUTICLE COL	ZC373.2.	L3162-112.	POLYPROTEIN.	EBNA1.	IAL	HYPOTHETICAL 51.5 KD P	PMGA, COMPLETE CDS.
1.19e+01	1.19e+01	1.19e+01	1.19e+01	_	8.13e+00	ū	5.54e+00	5.54e+00	5.54e+00	5.54e+00	5.54e+00	5.54e+00	5.54e+00	3.77e+00	2.55e+00	1.16e+00	1.16e+00	.16e+	7.75e-01		3.45e-0		3.27e-03	

ALIGNMENTS

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OF THE CONTROL OF THE	Su	Query Match 100.0%; Score 121; DB 11; Length 116; Best Local Similarity 100.0%; Pred. No. 1.08e-12; Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps	(REAM; PEOUSE: 1 (NON_TER 116 116 (NON_TER 116 116) SEQUENCE 116 AA; 12743 MW; 1C6E2733 CRC32;	SUBMITTED (NOV-1997) TO EMBL; AF032925; G264163 PROSITE; PS00249; PDGF	[1] SEQUENCE F STRAIN=SPR		01-JAN-1998 (TREMB 01-JAN-1998 (TREMB 01-JUN-1998 (TREMB VASCULAR ENDOTHELI	RESULT 1 ID 035485 PRELIMINARY; PRT; 116 AA.

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RESULT
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Q16528;
Q1-NOV-1996
Q1-NOV-1996
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BIOCHEM. BIOCHYS. RES. COMMUN. 22
EMBL; U52820, G1488261; -
EMBL; U43836; G1314334; -
MGD; MGI:106199; VRF.
PROSITE; PS00249; PDGF; 1.
PFAM; PF00341; PDGF.
SEQUENCE 207 AA; 21914 MW; 4F
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   VEGF
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MUS MUSCULUS (MOUSE).
EUKARYOTA: METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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EMBL; AF022952; G2766602; -.
PROSITE; PS00249; PDGF; 1.
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OLOFSSON B., PAJUSOLA K.,
ERIKSSON U.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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OLOFSSON B.;
PROC. NATL. ACAD.
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Q64290;
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   OR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSUE-HEART;
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          RELATED FACTOR
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VEGF-B.
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Similarity 100.0%;
14; Conservative
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96183052.
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Similarity 100.0%;
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3 (TREMBLREL. 06, )
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METAZOA; CHORDATA;
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150 AA;
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7 AA; 21914 MW;
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   CREATED)
LAST SEQUENCE UPDATE)
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VRF186 PRECURSOR.
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1. LAST SEQUENCE UPDATE)
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TH FACTOR RELATED PROTEIN
WIH FACTOR B 186).
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01-NOV-1996 (7
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PDGF PROTEIN
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                                                                                                                SUBMITTED (APR-1995) TO EMEMBL; L41623; G769680; -. PROSITE; PS00249; PDGF; 1.
                                                                           SEQUENCE
                                                                                                       PFAM; PF00341; PDGF.
                                                                                                                                                                                                                                                                                         Q63740;
Q63740;
104 PPCVEVQRCSGCC
                                                                                                                                                   MOATS-STAATS B.M.,
                                                                                                                                                                                                         RATTUS NORVEGICUS (RAT).
EUKARYOTA; METAZOA; CHOR
                                                                                                                                                                 TISSUE-LUNG;
                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL
CHAIN
SEQUENCE
                                                                                                                                                                           SEQUENCE FROM N.A.
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PFAM; PF00341;
SIGNAL.
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TISSUE-FIBROSARCOMA H
MEDLINE; 96197355.
OLOFSSON B.;
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EMBL; U52819; G1488259; -.
PROSITE; PS00249; PDGF; 1.
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J. BIOL. CHEM. 271:19310-19317(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE; 96325041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=FIBROSARCOMA HT-1080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRIMMOND S., LAGERCRANTZ J., I
POLLOCK P., GOTLEY D., CARSON
HAYWARD N., WEBER G.,
GENOME RES. 6:122-129(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROC. NATL. ACAD. SCI. U.S.A.
                                                                                                                                                                                                                                                                                                                                                           70 PSCVTVQRCGGCCP
                                                                                                                                                                                                                                                                                                                                               69 PSCVTVQRCGGCCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA;
EUTHERIA; PRIMATES.
[1]
                                     Similarity
                               10;
                                                                                                                                                                                                                                                                                                                                                                                        h 100.0%;
Similarity 100.0%;
14; Conservative
                                                                         1
183
183 AA;
                                                                                                                                                                                                                                           (TREMBLREL.
(TREMBLREL.
(TREMBLREL.
N (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                    1
22
207 AA;
                          Conservative
                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                           183
20160 Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PDGF.
     116
                                     80.2%;
76.9%;
                                                                                                                                   XU L., JARVIS W., STILES A.D.;
5) TO EMBL/GENBANK/DDBJ DATA BANKS
                                                                                                                                                                                                                                                                                                                                                                                                                                    21
207
21602
                                                                                                                                                                                                         CHORDATA;
                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HT-1080;
                                                                                                                                                                                                                                                    6,70
                                                                        MW;
                         Score 97; DB 11;
Pred. No. 1.38e-07;
2; Mismatches 3
                                                                                                                                                                                                                                                 , CREATED)
, LAST SEQUENCE UPI
, LAST ANNOTATION (
                                                                                                                                                                                                                                                                                                                                                                                                                                    Œ;
                                                                                                                                                                                                                                                                                                                                                                                        Pred.
0; 1
                                                                                                                                                                                                                                                                                                                                                                                              Score 121; DB 4;
Pred. No. 1.08e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
VEGF RELATED FACTOR ISOFORM; 16BDF6F1 CRC32;
                                                                                                                                                                                                        VERTEBRATA;
                                                                    69908655 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DRINKWATER
N E., RAKAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93:2576-2581(1996)
                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                 ON UPDATE)
                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHILOV
                                                                                                                                                                                                    TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ທ ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SILINS G., TOWNSON S., NORDENSKJOLD M., WARD L.,
                                            Length 183;
                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                        Length 207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D.,
                       Indels
                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALITALO
                                                                                                                                                                                                    MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MAMMALIA;
                      0;
                                                                                                                                                                                                                                                                                                                                                                                  0,
                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                   9
                                                                                                                                                                                                                                                                                                                                                                                 0,
```

PSCVTVQRCGGCC

1)

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RESULT

O 0.15354;
AC 0.15354;
DT 0.1 NOV-1996 (TREMBLREL 01, CREATED)
DT 0.1 NOV-1996 (TREMBLREL 01, LAST SEQUENCE UPDATE)
DT 0.1 NOV-1996 (TREMBLREL 06, LAST ANNOTATION UPDATE)
DT 0.1 JUN 1998 (TREMBLREL 06, LAST ANNOTATION UPDATE)
C-S1S PROTO-ONCOGENE (FRAGMENT).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAM
OC EUTHERIA; PRIMATES.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-CHORIOCARCINOMA;
RX MEDLINE; 95388493
RX MEDLINE; 95388493
RX MEDLINE; 95388493
RX MEDLINE; 95388493
RX MEDLINE; 9508249; DOGF; 1.
DR EMBL; X83705; G951025; -.
DR PRAM; PRO0341; PDGF; 1.
SCOUENCE 185 AA; 20774 MW; C5FAA883 CRC32;
                                                                                                                            SO DE RESERVE DE RESER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
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   Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 1
                                                                                                                                                                                  NUCLEIC ACIDS RES. 14.765-778(1986).

EMBL; X06298; E222210; JOINED.

EMBL; X06298; E222210; JOINED.

EMBL; X06298; E222210; JOINED.

EMBL; X06300; E222210; JOINED.

EMBL; X06300; E222210; JOINED.

EMBL; X06300; E222210; JOINED.

EMBL; X06300; E222210; JOINED.

EMBL; X03494; G1110; -

EMBL; X03494; G110; -

EMBL; X03555; G163887; JOINED.

EMBL; X03555; G163887; JOINED.

EMBL; X03555; G163887; JOINED.

EMBL; X05355; G163887; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VAN DEN
VAN NECK
NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q29613 PRELIMINARY: PRT; 210 AA.
Q29613;
Q1-9613;
Q1-NOV-1996 (TREMBLREL. 01, CREATED)
Q1-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
Q1-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
C-SIS ONCOGENE (PLATELET-DERIVED GROWTH FACTOR).
FELIS SILVESTRIS CATUS (CAT).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE: 86120370.

VAN DEN OUWELAND A.M.W., ROEBROEK A.J.M.
CLAESEN C.A.A., BLOEMERS H.P.J., VAN DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-21 I
MEDLINE; 86120370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE; 87146463.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EUTHERIA; CARNIVORA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          107 PPCVEVQRCSGCC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEN OUWELAND A.M.W., VAN GRONINGEN NECK H.W., BLOEMERS P.J., VAN DE VILEIC ACIDS RES. 15:959-970(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PSCVTVQRCGGCC
h 80.2%;
Similarity 76.9%;
10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 80.2%;
Similarity 76.9%;
                                                                                                                                   210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                PDGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                   23649
                                                                                                                                   MΨ;
Score 97; DB 6; I
Pred. No. 1.38e-07;
2; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 97; I
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                   1579ED72 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EN J.J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEN W.J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .38e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 185
                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCHALKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOEMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAMMALIA;
                                                                   210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              н.Р.J.;
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
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RESULT COORDINATE STREET COORDINATE COORDINA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UASCULAR ENDOTHELIAL GROWTH FAC.

HOMO SAPIENS (HUMAN).

EUKARYOTA; METAZOA; CHORDAM

EUTHERIA; PRIMATEO

[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SULT 8
041283
PRELIMINARY; PRT; 2:
041283
041283
01-JAN-1998 (TREMBLREL 05, CREATED)
01-JAN-1998 (TREMBLREL 05, LAST SEQUE
01-JUN-1998 (TREMBLREL 06, LAST ANNOT POLYPROTEIN PRECURSOR ENV-SIS.
SIMIAN SARCOMA VIRUS.
VIRIDAE; SS-RNA ENVELOPED VIRUSES; POS
                                                                                                                             Matches
                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE; 83144004.

DEVARE S.G., REDDY P.E., LAW J.

PROC. NATL, ACAD, SCI. U.S.A. 8

EMBL; J02394; G332621; -.

PROSITE; PS00249; PDGF; 1.

PEARLY PEODERN
                                                                                                                                                                                                                                                                                                                                             MOL. ENDOCRINOL. 5:1806-1814(1
EMBL; 885192; G246156; -.
EMBL; 885224 E91787; JOINED.
EMBL; 885199; E91787; JOINED.
EMBL; 885219; E91787; JOINED.
EMBL; 885219; E91787; JOINED.
EMBL; 885212; E91787; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1)
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE; 92168017.
HOUCK K.A., FERRARA N., WINER J., CF
HOUCK K.A., FERRARA N., WINER J., CF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLYPROTEIN.
SEQUENCE 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  016889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ONCOVIRINAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    216889;
                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                           PFAM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152 PPCVEVQRCSGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          126
   69
                                                              75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                    PSCVPLMRCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPCVEVQRCSGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSCYTYQRCGGCC
   PSCVTVQRCGGCC
                                                                                                                                                                                                                                                                                     PF00341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
10; Conser
                                                                                                                                                           Similarity
                                                                                                                             10;
                                                                                                                                                                                                                                                                                                                      PS00249;
                                                                                                                                                                                                                                                       341; PDGF
232 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             271 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                  PDGF;
                                                                                                                                                           76.9%;
76.9%;
   81
                                                           87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80.2%;
                                                                                                                                                                                                                                                       27042 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30328 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CREATED)
LAST SEQUENCE UPI
LAST ANNOTATION (
                                                                                                                      Score 93; DB 4;
Pred. No. 9.15e-07
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FACTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 97; DB 14; L
Pred. No. 1.38e-07;
2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J.D., ROBBINS K.C.,
80:731-735(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                       344182D1 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17F778D3 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE UPDATE)
ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACHIANES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POSITIVE-STRAND;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UPDATE)
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                                                                                                                                                                                        Length
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RESULT ID OS AC OS

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PRELIMINARY;

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RESULT AL SELECTION OF SELECTIO
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Best Local S
Matches 1
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Best Local s
Matches
                                                O35251 PRELIMINARY;
O35251; PRELIMINARY;
O1-JAN-1998 (TREMBLREL 05, C
O1-JAN-1998 (TREMBLREL 07, C
O1-AUG-1998 (TREMBLREL 07, C
O1-AUG-1998 (TREMBLREL 07, C
VASCULAR ENDOTHELIAL GROWTH F
VECE-D.
                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 98191144.

SKORJANC D., JASCHINSKI F., HEIN
AM. J. PHYSIOL. 274:0-0(1998).

EMBL; AF022179; G2465453; -.

PROSITE; PS00249; PDGF; 1.

PFAM; PF00341; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-1998 (TREMBLREL
01-JUN-1998 (TREMBLREL
01-AUG-1998 (TREMBLREL
VASCULAR ENDOTHELIAL G
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018843;
01-JAN-1998
01-JAN-1998
01-AUG-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGF.
EUTHERIA;
                RATTUS NORVEGICUS EUKARYOTA; METAZOA
                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
ZEALAND;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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ALITALO K., LE DOUARIN N.M.;
DEVELOPMENT 125:743-752(1998).
EMBL, X15837, E1215492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GALLIFORMES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EUTHERIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00249; PDGF; 1.
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Similarity 69.2%;
9; Conservative
                                                                                                                                                                                                                                                                                                                        Similarity
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 RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                    METAZOA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              METAZOA;
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B (TREMBLREL.
B (TREMBLREL.
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larity 76.9%;
Conservative
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46839 .
                                 (RAT)
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8720 MW;
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a; CHORDATA; VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                  29
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                  CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GROWTH
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05, LAST SEQUENCE UPDATE)
07, LAST ANNOTATION UPDATE)
OWTH FACTOR (FRAGMENT).
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                                                                    CREATED)
LAST SEQUENCE UPI
LAST ANNOTATION (
FACTOR D.
                                                                                                                                                                                                                                                                                                    Score 91; DB 6; Le
Pred. No. 2.34e-06;
1; Mismatches 2;
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LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
FACTOR C PRECURSOR.
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B7862854 CRC32;
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                                                                                                                                                              PRT;
                  VERTEBRATA;
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                  TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MUSCLE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TETRAPODA;
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                                                                                       UPDATE)
                                                                                                                                                                                                                                                                                                                                         Length 75;
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                MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAMMALIA;
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SEQUENCE FROM N.A.
STRAIN-SPRAGUE DAWLEY;
KMEDLINE; 97349118.
A YAMADA Y., NEZU J., SHIMANE M.,
L GENOMICS 42:483-488(1997).
JR EMBL; AF014827; G2323339; -.
PROSITE; PS00249; DDGF; 1.
DR PROMITE; DF00341; DDGF,
PFAM; PF00341; DDGF.
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Best Local S
Matches
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Best Local S
Matches 1
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ALTRALO K., STACKER S.A.;
PROC. NATL. ACAD. SCI. U.S.A. 95.
EMBL; Y12864; E1252272; JOINED.
EMBL; Y12865; E1252272; JOINED.
EMBL; Y12866; E1252272; JOINED.
EMBL; Y12867; E1252272; JOINED.
EMBL; Y12868; E1252272; JOINED.
EMBL; Y12869; E1252272; JOINED.
EMBL; Y12870; E1252272; JOINED.
EMBL; D89630; D1025175; -.
EMBL; AJ000105; E1250275; -.
EMBL; AJ000105; E1250275; -.
EMBL; Y12863; E1252270; -.
TLT 14
P97946
P97946;
01-MAY-1997
01-MAY-1997
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HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CI
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LT 13
043915
043915;
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01-JUN-1998 (TREMBLREL.
01-JUN-1998 (TREMBLREL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YAMADA Y., NEZU J., SHIMANE GENOMICS 42:483-488(1997).
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ROCCHIGIANI M., LESTINGI M., LUDDI A
ROSSI E., BALLABIO A., ZUFFARDI O.,
GENOMICS 47:207-216(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
ACHEN M.G., JELTSC
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                                                                                                                                                                134 PPCVNVFRCGGCC
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                                                                                                                              PSCVTVQRCGGCC
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                                                                                                                                                                                                 Similarity 76.9% 10; Conservative
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Similarity 76.9%;
10; Conservative
   (TREMBLREL.
                                                       PRELIMINARY;
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76.9%;
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   CREATED)
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LAST SEQ
LAST ANN
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                                                                                                                                                                                                                  Score 91; DB 4; 1
Pred. No. 2.34e-06
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Pred.
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                                                       PRT;
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                                                                                                                                                                                                                                                                        310D8150 CRC32;
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1. No. 2.34e-06;
Mismatches 2;
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                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAEKINEN T., VITALI
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, OLIVIERO S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         354
                                                       358
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                                                                                                                                                                                                                                    Length 354;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Α.,
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SEQUENCE UPDATE

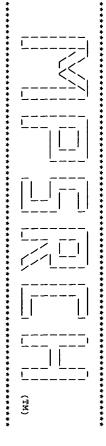
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RESULT 15
ID 070123; PRELIMINARY; PRT; 141 AA.
AC 070123; PRELIMINARY; PRT; PROMINE OF COMMENCE UPDATE)
DT 01-AUG-1998 (TREMBLREL 07, LAST SEQUENCE UPDATE)
DE VEGF115.
OS MUS MUSCULUS (MOUSE).
CE UTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-ICR;
RX MEDLINE; 95101726.
RX SUGIHARA T., KAUL S.C., MITSUI Y., WADHWA R.;
RX SUGIHARA T., WADHWA R., KAUL S.C., MITSUI Y.;
RX MEDLINE; 98112857.
RX MEDLINE; 98112857.
RX MEDLINE; 9812859.
DR SUGIHARA T., WADHWA R., KAUL S.C., MITSUI Y.;
RX MEDLINE; 9812859.
DR SUGIHARA T., WADHWA R., KAUL S.C., MITSUI Y.;
RX MEDLINE; 9812951983; -038(1998).
DR PROSITE; PS00249; PDGF; 1.
SQ SEQUENCE 141 AA; 15550 MW; 774CB7D2 CRC32;
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                                                                                                                                                        Query Match 71.9%;
Best Local Similarity 69.2%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 75.2%;
Best Local Similarity 76.9%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YAMADA Y., NEZU J., SHIMANE M., H.
GENOMICS 42:483-488(1997).
EMBL; V99572; E283242; -.
EMBL; D89628; D1014701; -.
MGD; MGI:108037; FIGF.
PROSITE; PS00249; PDGF; 1.
PFAM; PF00341; PDGF.
SEQUENCE 358 AA; 40908 MW; 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-C57BL/6J;
ORDANDINI M., MARCONCINI L., FERRUZZI R., OLIVIERO S.;
ORDANDINI M., MARCONCINI L., FERRUZZI R., OLIVIERO S.;
ORDANDINI M., MARCONCINI L., FERRUZZI R., OLIVIERO S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VEGF-D OR FIGF.
MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR D (C-FOS INDUCED GROWTH FACTOR).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-LUNG;
MEDLINE; 97349118.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139 PPCVNVFRCGGCC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EQUENCE FROM N.A.
74 PSCVPLMRCAGCC 86
|||| : ||:|||
69 PSCVTVQRCGGCC 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69 PSCYTYQRCGGCC 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 91; DB 11; Length 358; Pred. No. 2.34e-06;
                                                                                                                                                                                                Score 87; DB 11; Length 141; Pred. No. 1.49e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64E6B4E9 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIRATA Y.;
                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2;
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Search completed: Thu Job time : 52 secs.

Nov 26

00:02:49 1998

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Thu Nov 26 00:01:31 1998; MasPar time 2.31 Seconds 151.826 Million cell updates/sec

Tabular output not generated.

Description: Perfect Score: Sequence: Title: >US-09-033-662-2 (69-82) from US09033662.pep 1 PSCVTVQRCGGCCP 14

Scoring table: PAM 150 Gap 11

Searched: 69111 segs, 25083644 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: swiss-prot35 1:swiss1

Statistics: Mean 24.744; Variance 39.426; scale 0.628

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

222224 322224 32220	Result
121 121 121 97 97 97 98 88 88 88 88 88 88 88	Score
100.0 100.0 80.2 80.2 80.2 80.2 76.9 76.9 76.9 772.7 72.7 72.7 72.7 72.7	Query Match
188 225 225 224 241 241 241 241 241 241 241 241 241	Length
	BB
VEGB_HUMAN VEGB_RAT PDGB_RAT TSIS_SMSAV PDGB_SHEEP PDGB_HUMAN PDGB_FELCA VEGH_ORFN7 VEGC_HUMAN VEGF_RIG VEGF_BOYIN VEGF_BOYIN PDGA_RAT	ID
VASCULAR ENDOTHELIAL G PLATELET - DERIVED GROWT PLATELET - DENOTHELIAL G VASCULAR ENDOTHELIAL G PLATELET - DERIVED GROWT PLATEL - DERIVED GROWT PLATEL - DERIVED GROWT PLATEL - DERIV	Description
5.15e-13 7.65e-08 7.65e-08 7.65e-08 7.65e-08 7.65e-08 7.65e-08 7.65e-08 2.00e-07 2.00e-07 2.00e-07 5.18e-07 5.18e-07 5.18e-07 5.18e-07 5.18e-07 5.14e-06 6.44e-06 8.67e-06	Pred. No.

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70 PSCYTYQRCGGCCP 83

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UNC8_CAEEL	TOTAL MOOGE	TGER MOTTER	Y264_METJA	PSAC_SYNY3	EHO1_HUMAN	P2UR_HUMAN	P2UR_RAT	P2UR_MOUSE	MCS_MOUSE	VGL2_CVBLY	VGL2_CVBF	VGL2_CVHOC	K1M2_SHEEP	FERX_ACICA	CHA1_ANTPO	DCMA_METSO	YGCA_HAEIN	CHHC_BOMMO	сннв_воммо	PLGF_MOUSE	PLGF_HUMAN	VEGF_MOUSE
DEGENERIN UNC-8.	HOE CHACKE THOU	NIBECAR	HYPOTHETICAL PROTEIN M	PHOTOSYSTEM I IRON-SUL	EPILEPSY HOLOPROSENCEP	P2U PURINOCEPTOR 1 (AT	P2U PURINOCEPTOR 1 (AT	P2U PURINOCEPTOR 1 (AT	SPERM MITOCHONDRIAL CA	E2 GLYCOPROTEIN PRECUR	E2 GLYCOPROTEIN PRECUR	E2 GLYCOPROTEIN PRECUR	KERATIN, TYPE I MICROF	PUTATIVE FERREDOXIN.	CHORION CLASS A PROTEI	CARBON MONOXIDE DEHYDR	HYPOTHETICAL RNA METHY	CHORION CLASS HIGH-CYS	CHORION CLASS HIGH-CYS	PLACENTA GROWTH FACTOR	PLACENTA GROWTH FACTOR	VASCULAR ENDOTHELIAL G
/.24e+00		7 246+00	7.24e+00	7.24e+00	4.97e+00	4.97e+00	4.97e+00	4.97e+00	4.97e+00	3.39e+00	3.39e+00	3.39e+00	3.39e+00	3.39e+00	3.39e+00	2.31e+00	7.10e-01	4.76e-01	3.18e-01	3.46e-05	1.38e-05	8.67e-06

ALIGNMENTS

RESULT ID VEGEHOMAN AC P49765; AC P49765; AC P49765; AC P49765; DT 01-OCT-1996 (REL. 34, CREATED) DT 01-OCT-1996 (REL. 34, CREATED) DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE) DT 01-OCT-1996 (REL. 35, LAST SEQUENCE UPDATE) DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE) DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE) DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE) DE VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR (VEGF-B) (VEGF-B) (VEGF PCOM N. A. ROUNC SAPIENS (CHOMAN). ROUNCESSON N. A. REDINER; 96197355. RR OLLOFSSON B., PAJUSOLA K., KAIPAINEN A., VON EULER G., JOUROV V., RA SAKELA O., ORDANA A., PETTERSSON R.F., ALITALO K., ERIKSSON U.; RR OLLOFSSON B., PAJUSOLA K., KAIPAINEN A., VON EULER G., JOUROV V., RA SAKELA O., ORDANA A., PETTERSSON R.F., ALITALO K., ERIKSSON U.; RR OLLOFSSON B., PAJUSOLA K., KAIPAINEN A., VON EULER G., JOUROV V., RA SAKELA O., ORDANA A., PETTERSSON R.F., ALITALO K., ERIKSSON U.; RR OLLOFSSON B., PAJUSOLA K., KAIPAINEN A., VON EULER G., JOUROV V., RA SAKELA O., ORDANA A., PETTERSSON R.F., ALITALO K., ERIKSSON U.; RR OLLOFSSON B., PAJUSOLA K., KAIPAINEN A., VON EULER G., JOUROV V., RA SAKELA O., ORDANA A., PETTERSSON R.F., ALITALO K., ERIKSSON U.; RR PROLLOKE FROM N.A. RR SEQUENCE FROM N.A. RR SEQUENCE FROM N.A. RR SEQUENCE FROM N.A. RR GRIMMAND N., WEBER G.; RR MARD L., HAYWARD N., WEBER G.; RR MARD L., HAYWARD N., WEBER G.; RR MARD L., HAYWARD N., WEBER G.; RR GRIMMAND RES. 6122-129(1966). RR GRIMMAND RES. 6122-

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69

PSCVTVQRCGGCCP

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Best Local S
Matches 1
SEQUENCE FR
MEDLINE; 93
HERREN B.,
BIOCHIM. BI
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                                                                                                                                                                                           PDGFB
                                                                                                                                                                                                                               01-FEB-1994 (REL. 28, CH
01-FEB-1994 (REL. 28, LA
01-OCT-1996 (REL. 34, LA
PLATELET-DERIVED GROWTH
                                                                                                                                             RATTUS NORVEGICUS (RAT) EUKARYOTA; METAZOA; CHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOWNSON S., LAGERCRANTZ J., GRIMMOND S., SILINS G., MONDENSKJOLD M., WEBER G., HAYWARD N.K.;
BIOCHEM. BIOPHYS. RES. COMMUN. 220:922-928(1996).
-!- FUNCTION: GROWTH FACTOR FOR ENDOTHELIAL CELLS.
-!- SUBUNIT: HOMODIMER, DISULFIDE-LINKED. CAN ALSO
                                                                                                                              EUTHERIA;
                                                                                                                                                                                                                                                                                                                   Q05028;
                                                                                                                                                                                                                                                                                                                                    PDGB_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TO THE EXTRACELLULAR -!- TISSUE SPECIFICITY: P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE; 96:
TOWNSON S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OLOFSSON B., PAJUSOLA K.,
SAKSELA O., ORPANA A., PET
PROC. NATL. ACAD. SCI. U.S
                                                                                                                                                                                                            (PDGF-2) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MITOGEN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- SUBCELLULAR LOCATION:
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EUKARYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-HEART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EUTHERIA; RODENTIA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AND SKELETAL MUSCLE.
SIMILARITY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WITH VEGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGI:106199; VRF.
ITE; PS00249; PDGF;
GEN; GROWTH FACTOR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PSCVTVQRCGGCCP
                                                                                                                                                                                                                                                                                                                                                                                                                        PSCVTVQRCGGCCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U48800; G1234825;
U43837; G1314336;
                   E FROM N.A.
; 93305723.
B., WEYER K.A., 1
BIOPHYS. ACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                            RODENTIA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       188
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larity 100.0%;
Conservative
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                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
21442
                                                                                                                                                CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                                                      82
                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                                                                                                                                                                                    CREATED)
LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
TH FACTOR, B CHAIN PRECURSOR (PDGF
                 ROUGE M., LOETSCHER 1173:294-302(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 K., KAIPAINEN A., VON EULER G. PETTERSSON R.F., ALITALO K., U.S.A. 93:2576-2581(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABUNDANTLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MATRIX UNLESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 121; DB 1; L
Pred. No. 5.15e-13;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VASCULAR ENDOTHELIAL 7999A3C8 CRC32;
                                                                                                                                           VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PDGF/VEGF FAMILY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HEPARIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EXPRESSED
                                                                                                                                                                                                                                                                                                                                    225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REMAINS ASSOCIATED TO CELLS OR RELEASED BY HEPARIN.
RESSED IN HEART, BRAIN, KIDNEY
                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                           TETRAPODA; MAMMALIA
                                    ,
,
                                        PECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 188
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FORM F
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                                                                                                                                                                                                                             B-CHAIN)
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HETERODIMER
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Best Local S
Matches 1
PROSETTE; PSUVALL, PROTEIN TRANSFORMING PROTEIN 226 AA;
   DEVARE S.G., REDDY E.P., LAW J.D.
PROC. NATL. ACAD. SCI. U.S.A. 80:
-!- SIMILARITY: BELONGS TO THE PD
EMBL; V01201; G61777; ALT_INIT.
PIR; A01381; TVMVSS.
HSSP; P01127; 1PDG.
PROSITE; PS00249; PDGF; 1.
TRANSFORMING PROTEIN; ONCOGENE; G
SEQUENCE 226 AA; 25411 MW; DD)
                                                                                                                                                                                                                    21-JUL-1986
21-JUL-1986
01-OCT-1996
                                                                                                                                                                                                                                                       TSIS_SMS
                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROPEP CHAIN PROPEP SITE SITE DISULFID DISULFID
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MITOGEN;
NON_TER
SIGNAL
                                                                                                   SEQUENCE FROM N.A. MEDLINE; 83144004. DEVARE S.G., REDDY
                                                                                                                                                                    SIMIAN SARCOMA VIRUS
VIRIDAE; SS-RNA ENVE
                                                                                                                                                         ONCOVIRINAE
                                                                                                                                                                                                         PDGF-RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- TISSUE SPECIFICITY: EXPRESSED IN A DISTINCT SUBPOPULATION OF SMOOTH MUSCLE CELLS IN INJURED ARTERIES.
-1- A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE PDGF RECEPTOR.
-1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LINDNER V., GIACHELLI C.M., CIRC. RES. 76:951-957(1995)
-!- FUNCTION: PLATELET-DERI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 74-182 FROM N.A.
STRAIN-SPRAGUE-DAWLEY; TISSUE-SMOOTH
MEDLINE; 95277908.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP;
                                                                                                                                                                                                                                                                                                                                          114 PPCVEVQRCSGCC 126
                                                                                                                                                                                                                                                                                                                    69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT RO IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WO MAY HAVE A CHEMOTACTIC ROLE IN INTIMAL THICKENING.
SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
                                                                                                                                                                                                                                                                                                                    PSCVTVQRCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S25097; S25097.
                                                                                                                                                                                                                                                                     SMSAV
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L40991; G727178;
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                                                                                                                                                                                                                                                                                                                                                                  Similarity 76.9%
10; Conservative
                                                                                                                                                                                                                   (REL.
(REL.
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100
103
122
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126
126
                                                                                                                                                                                                      (REL. 01, CREATED)
(REL. 01, LAST SEQUENCE UI
(REL. 34, LAST ANNOTATION
TRANSFORMING PROTEIN P28-
                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                    STANDARD;
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                                                                           , LAW J.D., ROBBINS K.C., AARONSON U.S.A. 80:731-735(1983).
TO THE PDGF/VEGF FAMILY OF GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROTO-ONCOGENE;
                                                                                                                                                                    VIRUSES;
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INVOLVED IN RECEPTOR B
BY SIMILARITY
BY SIMILARITY
BY SIMILARITY
INTERCHAIN (BY SIMILAR
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Pred. No. 7
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BY SIMILARITY.
PLATELET-DERIVED OBY SIMILARITY.
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                                                                                                                                                                                                                                                                    PRT;
      GROWTH FACTOR.
DD3C74C1 CRC32;
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                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                 POSITIVE-STRAND; RETROVIRIDAE;
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28-SIS.
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7.65e-08;
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SIMILARITY).
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Matches Query Match Best Local

Local

Similarity 10; Conser

Conservative

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Score Pred. 2; M

Length 226;

Mismatches 97; DB 1; 1 No. 7.65e-08

Indels

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Gaps

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RESULT ACC DIT OF THE COLOR OF 
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STRAIN-TEXEL; TISSUE-SPLEEN;

STRAIN-TEXEL; TISSUE-SPLEEN;

WOODALL C.J., ZHANG Z., WAIT N.J.;

SUBMITTED (SEP-1996) TO EMBL/GENBANK/DDBJ DATA BANKS.

SUBMITTED (SEP-1996) TO EMBL/GENBANK/DDBJ DATA BOTENIT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.

-!- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF MONIDENTICAL (A
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DISULFID
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DISULFID
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Q95229;
                                                    PDGB_HUMAN STANDARD; PRT; 241 AA.

P01127;
21-JUL-1986 (REL. 01, CREATED)
21-JUL-1986 (REL. 01, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
PLATELET-DEFIVED GROWTH FACTOR, B CHAIN PRECURSOR (PDGF-2) (BACAPLERMIN).

PDGFB OR C-SIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SITE
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01-NOV-1997 (REL. 35,
01-NOV-1997 (REL. 35,
PLATELET-DERIVED GROWT
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                                                                                                                                                                                                                                                                                                                                                                                                                      122 PPCVEVQRCSGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF STREET PS00249; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPCVEVQRCSGCC
SAPIENS (HUMAN).
RYOTA; METAZOA; CHORDATA;
                                                                                                                                                                                                                                                                                                                                                                                        PSCVTVQRCGGCC
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larity 76.9%;
Conservative
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LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
TH FACTOR, B CHAIN PRECURSOR
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Pred.
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BY SIMILARITY.
PLATELET-DERIVED (
BY SIMILARITY.
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6DFB70E0 CRC32;
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      VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97; DB 1;
No. 7.65e-08
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   TETRAPODA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 241;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TO THE PDGF RECEPTOR
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      MAMMALIA
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MEDLINE; 842
CHIU I.-M.,
OEFNER C., D'ARCY A., WINKLER I EMBO J. 11:3921-3926(1992).
-!- FUNCTION: PLATELET-DERIVED
                                                                                                                                                                                                                          CRAIG S., DRUMMOND A.H., EDWARDS R.M., F HELLEWELL P.G., KIRWIN P.M., NAYEE P.D., CHAHWALA S.B., SNAREY M., WINSLOW D.;
                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 82-112.
MEDLINE; 83244981.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE; 83197379.
ANTONIADES H.N., HUNKAPILL SCIENCE 220:963-965(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 26-241 FROM MEDLINE; 86164981.
WEICH H.A., SEBALD W., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE; 87217119. RAO C.D., IGARASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE; 85269623. RATNER L., JOSEPHS
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MEDLINE; 85296313.
COLLINS T., GINSBURG D.,
NATURE 316:748-750(1985)
                                                                                                                      ANDERSSON M., OESTMAN A., BAECKTROEM G., GEORGE-NASCIMENTO C., WESTERMARK B., HEL
                                                                                                                                                                                                                                                                           MEDLINE; 92097530.
CLEMENTS J.M., BAWDEN L.J.,
                                                                                                                                                                                                                                                                                                                                                               WASTESON A., WESTERMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BURGESS J., ODELL C. SUBMITTED (OCT-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COLD SPRING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RATNER L., JOS
NUCLEIC ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CELL 37:123-129(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AARONSON S.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF
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PROC. NATL. ACAD.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE; 84250225.
JOSEPHS S.F., RATNER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                   MEDLINE; 93010987
                                                                                                                                                                                                                                                                                                              MUTAGENESIS,
                                                                                                                                                                                                                                                                                                                                                NATURE 304:35-39(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEBS LETT.
                                                                                                                                                                      INTERCHAIN DISULFIDE
                                                                     -RAY CRYSTALLOGRAPHY
                                                                                                      BIOL.
                                                                                                                                                                                                          10:4113-4120(1991).
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84205633.
                                                                                                       CHEM.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82-110.
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                                                                                                                                                                                                                                                                                                                IMPORTANCE OF ARG-108
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                                                                                                      267:11260-11266(1992).
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13:5007-5018(1985)
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                                   WINKLER F.K.,
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. QUANT. BIO
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U.S.A. 83:2392-2396(
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B., H
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                                                                    ANGSTROMS).
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   GROWTH
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DL. 51:959-966(1986).
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                                   EGGIMANN
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                                                                                                                        HELDIN
   FACTOR
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FALLON A., GR
D., RICHARDSON
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                                                                                                                                    HELLMAN U.,
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, GREEN D.
SON S.J.,
                                  HOSANG
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   POTENT MITOGEN
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UEL T.F.;
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Matches 1
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EMBL; K01918; G338209; JOINED.
EMBL; K01918; G338209; JOINED.
EMBL; K01398; G338209; JOINED.
EMBL; K01398; G338209; JOINED.
EMBL; K01400; G338209; JOINED.
EMBL; X02811; G35372; -...
EMBL; X02744; G30247; -...
EMBL; K01917; G338199; -...
EMBL; K01917; G338199; JOINED.
EMBL; K01913; G338199; JOINED.
EMBL; K01913; G338199; JOINED.
EMBL; K01915; G338199; JOINED.
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EMBL; K01916; G338199; JOINED.
   PDGB_MOUSE
P31240;
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MITOGEN; GROWTH F2
3D-STRUCTURE
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PDB; 1PDG; 31-JAN-94.
MIM; 190040; -.
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SIMILARITY: BELONGS TO THE POEF/VEEF FAMILY OF GRO
DATABASE: NAME-RAD Systems com/cyt_cat/pdgf.html".
WWW-"http://www.rndsystems.com/cyt_cat/pdgf.html".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND. SUBUNIT: ANTI-PARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOWODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
                                                                      PSCVTVQRCGGCC
                                                                                                       PPCVEVQRCSGCC
                                                                                                                                    Similarity
10; Conse
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                                                                                                                                   80.2%;
larity 76.9%;
Conservative
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                STANDARD;
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27283
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PROTO-ONCOGENE; PLATELET;
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                                                                                                                                 Score 97; DB 1; I
Pred. No. 7.65e-08;
2; Mismatches 1
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INTERCHAIN.
E -> R (IN
T -> E (IN
E -> C (IN
S -> C (IN
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                PRT;
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                241
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                                                                                                                                                              Length 241;
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                                                                                                                                   Indels
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GREDERAL
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RESULT
PDGFB OR C-SIS.
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Matches 1
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EMBL; M84448; G342573; JOINED.
EMBL; M84449; G342573; JOINED.
EMBL; M84450; G342573; JOINED.
EMBL; M84450; G342573; JOINED.
EMBL; M84451; G342573; JOINED.
EMBL; M84452; G342573; JOINED.
EMBL; M64849; G192820; JOINED.
EMBL; M64844; G192820; JOINED.
EMBL; M64846; G192820; JOINED.
EMBL; M64846; G192820; JOINED.
EMBL; M64847; G192820; JOINED.
EMBL; M64848; G192820; JOINED.
EMBL; M64847; G192820; JOINED.
EMBL; M64847; G192820; JOINED.
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EMBL; M64848; G192820; JOINED.
EMBL; M64848; G192820; JOINED.
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SIGNAL
PROPEP
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P12919;
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SEQUENCE
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MGD; MGI:97528;
PROSITE; PS00249
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(PDGF-2).
PDGFB OR C-SIS.
MUS NUSCULUS (MOUSE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BONTHRON D.T., SULTAN P., GENOMICS 10:287-292(1991)
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01-JUL-1993 (REL.
01-OCT-1996 (REL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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A-A AND B-B, AS WELL AS F
SIMILARITY: BELONGS TO TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICITS A VALUETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND. SUBUNIT: ANTI-PARALLEL DISULFIDE-LINKED DIMER OF WONDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
                                                                                                                                                                                                                     PSCVTVQRCGGCC
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Similarity 76.9%;
10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                FROM N.A.
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                                                                                                                                                         STANDARD;
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.. 26, LAST SEQUENCE UPDATE;
.. 34, LAST ANNOTATION UPDATE;
.. 34, LAST ANNOTATION UPDATE;
                                                                                     12, CREATED)
12, LAST SEQUENCE UPDATE)
35, LAST ANNOTATION UPDATE
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R; PROTO-ONCOGENE; PLATELET; S

BY SIMILARITY.

BY SIMILARITY.

PLATELET-DERIVED GROW

BY SIMILARITY.

TN RECEPTOR
                                                                         FACTOR, B CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                    W.
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                                                                                                                                                                                                                                                                                                  Score 97; I
Pred. No. 7.
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INTERCHAIN (BY SIMILARITY)
POTENTIAL.
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                                                                                                                                                       245
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                                                                                                                                                                                                                                                                                                                                                CRC32;
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Best Local (
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01-OCT-1996 (REL. 34, CREATEU)
01-OCT-1996 (REL. 34, LAST SEQ
01-OCT-1996 (REL. 34, LAST SEQ
01-OCT-1996 (REL. 34, LAST NEV
01-OCT-1996 (REL. 34, LAST NEV
01-OCT-1996 (REL. 34, CREATEU)
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VAN DEN OUWELAND A.M.W., VAN GRONINGEN VAN NECK H.W., BLOEMERS H.P.J., VAN DE NUCLEIC ACIDS RES. 15:959-970(1987).
[2]
                                                                                           EMBL;
                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE; 94076465.
LYTTLE D.J., FRASER K.M.,
J. VIROL. 68:84-92(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
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VAN DEN OUWELAND
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EUKARYOTA; METAZOA;
                                                                                                                                                                                                                                                                                                  ORF VIRUS (STRAIN
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                                     SIGNAL
                                                        MITOGEN;
                                                                          PROSITE;
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                                                                                                                                                                                                                                                             VIRIDAE; DS-DNA
PARAPOXVIRUSES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126 PPCVEVQRCSGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                         FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
SUBUNIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY)
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A-A AND B-B, AS WELL AS A-B, SIMILARITY: BELONGS TO THE P X05112; E281569; ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MITTED (NOV-1996) TO EMBL/GENBANK/DDBJ DATA BANKS.

FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND. SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF MONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A26402
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P01127; 1PDG.
                                                                                         S67520; G456899;
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                                                        GROWTH
                                                                          PS00249;
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                                                        FACTOR;
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OA; CHORDATA;
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LAST SEQUENCE UPDATE)
LAST ANNOTATION UPDATE)
GROWTH FACTOR HOMOLOG PR
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BY SIMILARITY.
                                                        GLYCOPROTEIN;
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VASCULAR ENDOTHELIAL
BY SIMILARITY.
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                                                        SIGNAL
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7.65e-08;
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01-0CT-1996
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P52585;
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LYTTLE D.J., FRASER K.M., FLEMING S.B., MERCER & J. VIROL. 68:84-92(1994).

-!- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
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ORF VIRUS (STRAIN
VIRIDAE; DS-DNA EN
                                                                                                                                    01-OCT-1996 (REL. 34, CREATED)
01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
VASCULAR ENDOTHELIAL GROWTH FACTOR C PRECURSO
ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (V
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                                                                 HOMO SAPIENS (HUMAN)
EUKARYOTA; METAZOA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                           VEGC_HUMAN P49767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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MEDLINE; 9407640
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FE; PS00249; PDGF;
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10; Conser
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(REL. 34, LAST SEQUENCE UPDATE)
(REL. 34, LAST ANNOTATION UPDATE)
DOTHELIAL GROWTH FACTOR HOMOLOG PRECURSOR
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larity 76.9%;
Conservative
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76.9%;
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POTENTIAL.

PASCULAR ENDOTHELIAL GROWTH F
BY SIMILARITY.
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INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
POTENTIAL.

POTENTIAL.

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INTERCHAIN (BY
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1. No. 2.00e-07;
Mismatches 2
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FAMILY OF GROWTH FACTORS.
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SIMILARITY).
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                                                                                                                                      (VEGF-C) (VASCULAR
P) (FLT4 LIGAND).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                       Indels
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SEQUENCE FROM N.A., MEDLINE; 96178224. JOUKOV V., PAJUSOLA

AND <u>۳</u>.

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103-120

KAIPAINEN SEQUENCE

Α.,

CHILOV

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LAHTINEN

CHORDATA;

VERTEBRATA;

TETRAPODA;

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Best Local S
Matches 1
                                                                                                                                 VEGF_SHEEP STANDARD P50412;
P50412;
01-OCT-1996 (REL. 34, C)
01-OCT-1997 (REL. 35, L)
01-NOV-1997 (REL. 35, L)
VASCULAR ENDOTHELIAL GR
                                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                         MEDLINE; 97117958.
REDMER D.A., DAI Y., LI
REYNOLDS L.P., MOOR R.M.
                                                                                                        OVIS
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DOMAIN
REPEAT
REPEAT
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FITZ L., MORRIS J.C., TOWLER P.S., LONG A.J., GRECO R., BURGESS P., GIANNOTTI J., CIARLETTA A., HENNESSEY D., KOVACIC FITZGERALD M., SCALTRETO H., WEICH N., NEBEN S., FINNERTY H., ZOLLNER R., WANG J., NICKBARG E., GASSAWAY R., TURNER K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE; 96203094.

MEDLINE; 96203094.

JOUROV V., PAJUSOLA K., KAIPAINEN.

KUKK E., SAKSELA O., KALKKINEN N.,

EMBO J. 15:1751-1751(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KUKK
EMBO
                                                        TISSUE-KIDNEY;
                                                                                               EUKARYOTA;
                                                                                                                           PERMEABILITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBMITTED (JUN-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBMITTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
LEE J., GRAY A., YUAN
                                                                                      EUTHERIA; ARTIODACTYLA
                                                                                                                                                                                                                                                                                                                                                                                               PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                           154
                                                                                                                                                                                                                        69
REPROD. FERTIL 108:157-165(1996).
- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION
                                                                                                                                                                                                                                                                                                                                                                                                                        - SUBUNIT: HOMODIMER, E
PTM: PROBABLY PROTEOI
- SIMILARITY: BELONGS T
BL: X94216; E221096; T
BL: U43142; G1150989;
BL: U58111; G1373427;
BL: U58111; G1373427;
OSITE: PS00249; PDGF: 1
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                                                                                                                                                                                                                        PSCVTVQRCGGCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , SAKSELA O., KALKKINEN 15:290-298(1996).
                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIT: HOMODIMER, DISULFIDE-LINKED. PROBABLY PROTEOLITICALLY PROCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FROM N.A.
MORRIS J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                  GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (JAN-1996)
                                                                                              METAZOA;
                                                                                                                                                                                                                                                                                                 240
419 /
                                                                                                                          FACTOR)
                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GROWTH
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A
                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                          FACTOR;
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                                                                                                                                                                                                                                          166
                                                                                               CHORDATA;
                                                                                                                                                                                                                                                                    77.78;
76.98;
                                                                                                                                                                                                                                                                                                 46883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TO EMBL
                                                                                                                                  , LAST SEQUENCE UPDATE)
, LAST ANNOTATION UPDATE)
GROWTH FACTOR PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J., LUOH S.M., AVRAHAM H., WOOD TO EMBL/GENBANK/DDBJ DATA BANKS.
                                                                                                                                                               CREATED)
                                     J.,
                                                                                                                                                                                                                                                                                                                                                                                                       GLYCOPROTEIN; S
POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL/GENBANK/DDBJ DATA BANK
CTOR ACTIVE IN ANGIOGENESIS,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               THE
                                                                                                                                                                                                                                                                      Score 94;
Pred. No.
                                                                                                                                                                                                                                                           Pred.
                                       CHARNOCK - JONES
                                                                                                                                                                                                                                                                                                           POTENTIAL.
POTENTIAL.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                          VASCULAR ENDOTHELIAL GROWTH FACTOR 4 X 24 AA TANDEM REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                                                   PRT;
                                                                                               VERTEBRATA; TETRAPODA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLY PROCESSED IN THE C-TERMINUS PDGF/VEGF FAMILY OF GROWTH FACT
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, ALITALO K.;
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                                       s;
                                                                                                                                   (VEGF)
                                                                                                                                                                                                                                                                               Length 419
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                                       SMITH
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 , AND ENDOTHELIAL. AND VASCULAR
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                                                                                                                                    (VASCULAR
                                                                                                MAMMALIA;
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Best Local S
Matches
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Best Loc
Matches
                                                                                                                                                                                                EMBL; M84
PROSITE;
MITOGEN;
DISULFID
DISULFID
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DISULFID
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PROSITE;
MITOGEN;
SIGNAL
CHAIN
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DISULFID
CARBOHYD
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BERSE B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EUKARYOTA;
EUTHERIA; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VEGF_CAVPO P26617;
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-!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, &
CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FACTOR) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-AUG-1992 (REL. 23,
01-AUG-1992 (REL. 23,
01-OCT-1996 (REL. 34,
VASCULAR ENDOTHELIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-AUG-1992
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                                                                                                                                                                              SEQUENCE
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    69
                                             48
                                                                                                          Local |
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                                                                                                                                                                                                                                                                                                                                                                                                SIMILARIT
                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION: TO THE EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CELL GROWTH. INDUCES PERMEABILITY. SUBUNIT: HOMODIMER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY:
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                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TO THE EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PERMEABILITY
                                             PSCVPLMRCGGCC
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    PSCVTVQRCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x89506;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 76.9%;
Similarity 76.9%;
10; Conservative
                                                                                                            Similarity
                                                                                        10;
                                                                                                                                                                                                                                                                                                                                   GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FROM N.A.
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27
51
82
86
86
76
100
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                                                                                        Conservative
                                                                                                                                                                                                  9; PDGF;
1 FACTOR;
67
5 101
0 103
0 50
9 59
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146
93
127
129
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    82
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                                                                                                          76
76
                                                                                                                                                                              19330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GROWTH
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R; GLYCOPROTEIN; SIGNAL.

6 BY SIMILARITY

6 VASCULAR ENDOTHELIAL GROWTH

BY SIMILARITY

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BY SIMILARITY

INTERCHAIN (BY SIMILARITY).

POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAST SEQUENCE UP
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                                                                                                          .98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFIDE-LINKED
                                                                                                                                                                                                                                                                                                                                 GLYCOPROTEIN.
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                                                                                                                                                                                                                                                                                                                                                                                                  THE PDGF/VEGF FAMILY OF
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Pred.
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BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY
INTERCHAIN (BY
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                                                                                        1;
                                                                                                                                                                                                  INTERCHAIN POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERTEBRATA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDGF/VEGF FAMILY
                                                                                                                                                                              AEEB8DF3
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                                                                                          Mismatches
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                                                                                                          93; DB 1;
No. 5.18e-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (VEGF)
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. 5.18e-07
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UPDATE)
                                                                                                                                                                              CRC32;
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                                                                                                                                                                                                                      SIMILARITY).
SIMILARITY).
                                                                                                                                   Length
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D BY HEPARIN ()
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D BY HEPARIN (BY
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                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND
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SHARMA H.S., TANG Z.H., GHO B.C.H., VERDOUW P.D.;

BIOCHIM. BIOPHYS. ACTA 1260:235-238(1995).

-I- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION. AND VASCULAR PERMEABILITY (BY SIMILARITY).

-I- SUBURIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY).

-I- SUBURIT: HOMODIMER, DISULFIDE-LINKED SASSOCIATED TO CELLS TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY
                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
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DISULFID
CARBOHYD
SEQUENCE
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PROSITE;
MITOGEN;
SIGNAL
                                                                                      SEQUENCE FROM N.A., AND SEQUENCE OF MEDLINE; 90069608.
LEUNG D.W., CACHANES G., KUANG W.-J SCIENCE 246:1306-1309(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VEGF_PIG STANDARD; PRT; 190 AA. P49151; 01-FEB-1996 (REL. 33, CREATED) 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE) 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR PERMEABILITY FACTOR) (VPF).
                               TISCHER E., GOSPODAROWICZ D., I
LAU K., CRISP T., FIDDES J.C.,
BIOCHEM. BIOPHYS. RES. COMMUN.
                                                                SEQUENCE OF MEDLINE; 901
                                                                                                                                                        BOS TAURUS (BOVINE).
EUKARYOTA; METAZOA; CHORDATA;
EUTHERIA; ARTIODACTYLA.
                                                                                                                                                                                                             VEGF_BOVIN STANDARD: PRT: 190 AA. P15691: 01-APR-1990 (REL. 14, CREATED) 01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE) 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE) VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR
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EUKARYOTA; METAZOA; CHO
EUTHERIA; ARTIODACTYLA.
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                                                                                                                                                                                                                                                                                                                                 74 PSCVPLMRCGGCC
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Similarity 76.9%;
10; Conservative
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BY SIMILARITY:
BY SIMILARITY:
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Pred. No. 5.18e-07
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INTERCHAIN (BY SIMILARITY).
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                               MITCHELL R., SILVA M., ABRAHAM J.A.;
. 165:1198-1206(1989).
                                                                                                                                                                     VERTEBRATA; TETRAPODA;
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                                                                                                            W.-J.,
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                                                   SILVA M.,
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SEQUENCE OF 27-31. MEDLINE; 89286596.

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EMBL; M33750; G163811; -
PIR; A33255; A33255.
PIR; A33787; A33787.
PIR; B40080; B40080.
PROSITE; PS00249; PDGF;
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BIOCHEM. BIOPHYS. RES. COMMUN. 161:851-858(1989).
-!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
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  69
                                                  74 PSCVPLMRCGGCC 86
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SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
SUBCELLULAR LOCATION: SECRETED BUT RE
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  PSCVTVQRCGGCC
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                                                                                                  Conservative
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76.9%;
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                                                                                               Score 93;
Pred. No.
1; Misma
                                                                                                                                                                                                                            INTERCHAIN (BY INTERC
                                                                                                                                                                                                                                                                                                                                                           VASCULAR ENDOTHELIAL
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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E22F67FD CRC32;
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No. 5.18e-07
                                                                                                                                                                                                                                                            (IN BETA-FORM).
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SIMILARITY).
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D BY HEPARIN (BY
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Release 3.1A John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1998 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Thu Nov 26 00:00:38 1998; MasPar time 3.45 Seconds 148.181 Million cell updates/sec

Title:

Description: Perfect Score: Sequence: >US-09-033-662-2 (69-82) from US09033662.pep 121

1 PSCVTVQRCGGCCP 14

Scoring table: PAM 150 Gap 11

Searched: 120441 seqs, 36531193 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

pir56 1:pir1 2:pir2 3:pir3 4:pir4 5:nrl3d

Statistics: Mean 23.485; Variance 43.203; scale 0.544

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

22221111111111111111111111111111111111	Result
121 121 121 121 121 121 121 121 121 121	Score
100.0 100.0 80.2 80.2 80.2 80.2 80.2 80.2 80.2	Query Match
188 63 63 63 63 63 63 63 64 64 64 64 64 64 64 64 64 64 64 64 64	Length [
000000000000000000000000000000000000000	BB
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vascular endothelial vascular endothelial platelet-derived grow pl	Description
3.68e-11 3.3e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06 1.33e-06	Pred. No.

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hypothetical protein MHa3 (keratin acidic RNA methyltransferase	placental growth ract hypothetical protein high cysteine chorion keratin 2, type I, ha high-cysteine chorion	endothel	-derived -derived -derived endothel	platelet-derived grow
2.13e+00 3.04e+00 4.33e+00	1.10e-02 1.03e+00 1.03e+00 1.03e+00	8.78e-05 8.78e-05 8.78e-05 1.32e-04	5.81e-05 5.81e-05 5.81e-05 8.78e-05	5.81e-05 5.81e-05 5.81e-05 5.81e-05 5.81e-05 5.81e-05

ALIGNMENTS

RESULT 2 ENTRY TITLE ALTERIANES ORGANISM DATE	Query Match Best Local Similarity Matches 14; Conser Db 70 PSCVTVQRCGGCCP	ons	##molecule_type mRNA ##residues 1-18 ##cross-references G COMMENT This factor is and belongs t differentiall endothelial g GENETICS #gene vrf	ACCESSIONS REFERENCE #authors #journal #title #title #accession	1 NAMES
JC4679 #type complete vascular endothelial growth factor-related factor 186 - monsov VRF 186 protein, VEGF 186 #formal_name Mus musculus #common_name house mouse 10-May-1996 #sequence_revision 19-Jul-1996 #text_change 10-Sep-1997	100.0%; Score 121; DB 2; Length 188; Similarity 100.0%; Pred. No. 3.68e-11; 14; Conservative 0; Mismatches 0; Indels 0; Gaps ^: VTVQRCGGCCP 83	19 137/2 #domain signal sequence #status predicted #label SIG\ #product vascular endothelial growth factor-related factor #status predicted #label MAT #length 188 #molecular-weight 21442 #checksum 5881	##molecule_type mRNA ##residues mail	JC4680 JC4679 JC4679 JC4679 JC4679 TOWNSON, S.; Lagercrantz, J.; Grimmond, S.; Silins, G.; Nordenskjoeld, M.; Weber, G.; Hayward, N. Blochem. Biophys. Res. Commun. (1996) 220:922-928 Characterization of the murine VEGF-related factor gene. JC4680	JC4680 #type complete vascular endothelial growth factor-related factor 167 - mouse VRF 167 protein #formal_name Mus musculus #common_name house mouse 10-May-1996 #sequence_revision 19-Jul-1996 #text_change 10-Sep-1997

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23
12-60
16-62
SUMMARY
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5-13
21-40,44-63
18-21
41-44
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##cross-references GB:U43836; NID:g1703480; PID:g1314334
COMMENT This factor is a mitogen, that is selective for endothelial cells, and belongs to a family of growth factors. This transcript is differentially spliced to produce two major isoforms, vascular endothelial growth factors 167 and 186.
                                                                                                                                                                                                                                                                                                                                                REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
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                                                                  Match 80.2%;
Local Similarity 76.9%;
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                           PPCVEVQRCSGCC
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Crystal structure of human
Resolution: 3.0 angstroms
Determination: X-ray diffraction
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Similarity 100.0%;
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Platelet-derived growth f
human
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JC4679
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factor #status predicted #label MAT
gth 207 #molecular-weight 21914 #checksum 1525
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beta sheet\
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Pred. No. 1.33e-
2; Mismatches
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Pred. No. 3.68e-11;
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o 1PDGA2:15)\
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SUMMARY
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KEYWORDS
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#cross-references pDB:IPDG
REFERENCE TN011667
#authors Oefner, C.; D
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REFERENCE TN011671
#authors Oefner, C.; D'arcy, A.; Winkler, F.K.; Eggimann,
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Determination: X-ray diffraction Growth factor
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#cross-references_MUID:92117992
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##residues 1-161 ##label RES
##residues EMBL:X63966; NID:g311378; PID:g35377
##cross-references EMBL:X63966; NID:g311378; PID:g35377
##CTOSTION #superfamily platelet-derived growth factor
RY #length 161 #molecular-weight 18237 #checksum
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##cross-references EMBL:X83705
#length 185 #molecular
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##residues 1-18
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platelet-derived growth factor-BB - human
#formal_name Homo sapiens #common_name man
06-Sep-1996 #sequence_revision 06-Sep-1996 #text_change
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#formal_name Rattus norvegicus #common_name
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                                                                                                    #journal Proc. Natl. Acad. Sci. U.S.A. (1983) 80:731-735
#title Nucleotide sequence of the simian sarcoma virus genome:
demonstration that its acquired cellular sequences encode
the transforming gene product p28(sis).
#cross-references MUID:83144004
#accession A01381
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##residues 89-172 ##label HER2
##cross-references EMBL:Z14117
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##residues 1-226 ##label DEV
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##molecule_type mRNA
##residues 74-182 ##label RES
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Similarity 76.9%;
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A subpopulation of smooth muscle cells in injured rat
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23-Jul-1983 #sequence_revision 20-Sep-1984 #text_change
31-Oct-1997
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                                                                                                                                                                        M.S.; Wong-Staal, F.

#journal Science (1984) 225:636-639

#title Transforming potential of human c-sis nucleotide sequences
encoding plattelet-derived growth factor.

#cross-references MUID:84250225
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                                                                                                  ##residues 1-230 ##label JOH
##cross-references GB:X00556; GB:X00559; GB:X00560; GB:X00561;
#FICATION #superfamily platelet-derived growth factor

RYY #length 230 #checksum 3580
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Similarity 76.9%;
10; Conservative
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Similarity 76.9%;
Chiu, I.M.; Reddy, E.P.; Givol, D.; Robbins, K.C.; Tronick, S.R.; Aaronson, S.A. Cell (1984) 37:123-129
Nucleotide sequence analysis identifies the human c-sis proto-oncogene as a structural gene for platelet-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Johnsson, A.; Heldin, C.H.; Wasteson, A.; Westermark, B.;
Deuel, T.F.; Huang, J.S.; Seeburg, P.H.; Gray, A.; Ullrich,
A.; Scrace, G.; Stroobant, P.; Waterfield, M.D.
EMBO J. (1984) 3:921-928
The c-sis gene encodes a precursor of the B chain of
platelet-derived growth factor.
A55030
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18-Apr-1984 #sequence_revision 20-Sep-1984 #text_change
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platelet-derived growth factor chain B precursor -
PDGF B-chain; PDGF-B; PDGF-II; PDGF-related transfo
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                                                                                                                                                                                                                                             Josephs, S.F.; Ratner, L.; Clarke,
M.S.; Wong-Staal, F.
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platelet-derived growth factor chain B precursor -
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similarity #label PDG
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Pred. No. 1.33e-06;
2; Mismatches 1
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#journal Science (1993) 220:963-965
#title Human platelet-derived growth factor (PDGF): amino-terminal
amino acid sequence.
#cross-references_MUID:83197379
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#accession A25141
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#title Structure and sequence of the human c-sis/platelet-derived
growth factor 2 (SIS/PDGF2) transcriptional unit.
#cross-references_MUID:86205961
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#*residues 1-241 ##label COL
##cross-references GB:X02811; NID:g35371; PID:g35372
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                                                                                                                                                                              ##molecule_type DNA
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##residues 82-112 ##label WAT
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##residues 82-100,'E',102-104,'C',106,'C',108-110 ##label
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Lu, K.V.; Rohde, M.F.; Thomason, A.R.; Kenney, W.C.; Lu, I
Biochem. J. (1995) 309:411-417
Mistranslation of a TGA termination codon as tryptophan in
recombinant platelet-derived growth factor expressed in
                                                                                                                                                                                                                                                               Josephs, S.F.; Guo, C.; Ratner, L.; Wong-Staal, F. Science (1984) 223:487-491
Human proto-oncogene nucleotide sequences corresponding the transforming region of simian sarcoma virus.
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The human osteosarcoma cell line U-2 OS expresses a 3.8 kilobase mRNA which codes for the sequence of the PDCF-R
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Cultured human endothelial cells express platelet-derived growth factor B chain: cDNA cloning and structural
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A23532
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GB:M16288; NID:g338210;
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CLASSIFICATION
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191-241
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#journal Nucleic Acids Res. (1985) 13:5007-5018
#title Nucleotide sequence of transforming human c-sis cDNA clones
#title with homology to platelet-derived growth factor.
#cross-references MUD:85269623
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134-180
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NIT The receptor for this growth factor is a tyrosine kinase.

Human platelet-derived growth factor, a potent mitogen for cells comesenchymal origin, is a disulfide-linked dimer of two chains, which may be both of type A, both of type B, or an A-B which may be both of type A, both of type B, or an behalf of the compact of the disulfide bonds irreversibly destroys biological activity. Different receptors bind preferentially to A-A and B-B homodimers. This growth factor induces a variety of cellular responses.

NIT B and A chains are encoded by genes located on different chromosomes. The two genes are expressed independently in human timer call line.
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pp_position 22q12.3-22q13.1
prirons 57/3; 94/1; 192/3; 241/1
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##residues 82-93 ##label LUK
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Mol. Cell. Biol. (1988) 8:284-292
The 5' untranslated sequence of the c-sis/platelet-derived
growth factor 2 transcript is a potent translational
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                                                                                                                                                                         #length 241
             Conservative
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                                                                                                                                                                                                            #status experimental\
#disulfide_bonds interchain (to chain A-124
heterodimeric form) #status predicted
                                                                                                                                                                                                                                                                                                                                  #status experimental\
#disulfide_bonds interchain (to chain A-132 in heterodimeric form) #status predicted\
#disulfide_bonds interchain (to 124 in homodime
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#domain carboxyl-terminal propeptide *Status
#label CTP\
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#product platelet-derived growth factor chain
experimental #label MAT\
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#disulfide_bonds interchain (to 133 in
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                                           80.2%;
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Score 97; Db ., ored. No. 1.33e-06;
                                                                                  Length 241;
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82-190
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Best Local
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63
                                                                                                                                                                                                                                                          #authors Van den Ouweland, A.M.W.; Van Groningen, J.J.M.; Schalken,
J.A.; Van Neck, H.W.; Bloemers, H.P.J.; Van de Ven, W.J.M.
#journal Nucleic Acids Res. (1987) 15:959-970
#title Genetic organization of the c-sis transcription unit.
#cross-references_MUID:87146463
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Similarity 76.9%;
10; Conservative
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#superfamily platelet-derived growth factor
glycoprotein; growth factor; platelet; proto-oncogene;
transforming protein
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PDGF-related transforming protein

#formal_name Mus musculus #common_name house mouse

31-Dec-1992 #sequence_revision 31-Mar-1993 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                   TYCTSS #type complete
platelet-derived growth factor chain B precursor - cat
pDGF-related transforming protein
#formal_name Felis silvestris catus #common_name domestic
30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change
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                                                                                                          #superfamily platelet-derived growth factor
glycoprotein; growth factor; platelet; proto-oncogene.
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platelet-derived growth factor chain B precursor (sis) .
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#domain propeptide #status predicted #label PRO\
#product platelet-derived growth factor chain B #status
predicted #label MAT\
#region receptor binding #status predicted\
#region receptor binding #status predicted\
#binding_site carbohydrate (Asn) (covalent) #status
#domain signal sequence #status predicted #label SIG\
#domain propeptide #status predicted #label PRO\
#product platelet-derived growth factor chain B *stat
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Best Local Similarity 76.9%;
Matches 10; Conservative
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Best Local Similarity 76.9%;
Matches 10; Conservative
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63
                                                                                                                                                                                                                                                  #authors Lyttle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.;
Robinson, A.J.
#journal J. Violo. (1994) 68:84-92
#journal Homologs of vascular endothelial growth factor are encoded by
#title the poxvirus orf virus.
#cross-references MUID:94076465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors Hannink, M.; Sauer, M.K.; Donoghue, D.J.
#journal Mol. Cell. Biol. (1986) 6:1304-1314
#Cross-references MUID:87064399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #accession
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                                                                             152 PPCVEVQRCSGCC 164
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#status preliminary

#molecule_type protein

#residues 1-271 #mlabel HAN

1-271 #molecular Terminal Coding Region of the v-sis

#mote deletions in the C-Terminal Coding Region of the v-sis

#mote Gene: Dimerization Is Reguired for Transformation

IFICATION #superfamily platelet-derived growth factor

#length 271 #molecular-weight 30108 #checksum 5973
                                                                                                                                                                                                    ##status
                                                                                                                                                                                ##molecule_type DNA
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   h 78.5%;
Similarity 76.9%;
10; Conservative
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07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                              B49530 #type complete vascular endothelial growth factor homolog A2R, 14.7K - Orf
                                                                         #length 133 #molecular-weight 14729
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28-Sep-1987 #sequence_revision 28-Sep-1987 #text_change
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#binding_site carbohydrate (Asn) (covalent) #status
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Score 95; DB 2; Length 133; Pred. No. 3.11e-06; 2; Mismatches 1; Indels
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Pred. No. 1.33e-06;
2; Mismatches 1; Indels
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                                  Length 133;
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Db 59 PPCVTLMRCGGCC 71
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Qy 69 PSCVTVQRCGGCC 81
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Search completed: Thu Nov 26 00:01:13 1998 Job time: 35 secs.

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Release 3.1A John F. Collins, Biocomputing Research Copyright (c) 1993-1998 University of Edinburgh, U. Distribution rights by Oxford Molecular Ltd

Run on: MPsrch_pp protein - protein database search, using Smith-Waterman algorithm Wed Nov 25 23:59:51 1998; MasPar time 2.92 Seconds 77.454 Million cell updates/sec

Tabular output not generated.

Description: Perfect Scor Score: >US-09-033-662-2 (69-82) from US09033662.pep PSCVTVQRCGGCCP 14

Sequence:

Scoring table: PAM 150 Gap 11

Searched: 131922 seqs, 16180660 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

a-geneseq32
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28

Statistics: Mean 17.247; Variance 67.281; scale 0.256

Pred. d. No. is the number of results predicted by chance to have a re greater than or equal to the score of the result being printed, is derived by analysis of the total score distribution.

SUMMARIES

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1001 1001 1102 1102 1103 1103 1103 1103	Length
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Query Match 100.0%; Best Local Similarity 100.0%; Matches 14; Conservative

Score 121; DB 19; Pred. No. 6.06e-05; 0; Mismatches 0;

Length 101; Indels

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Gaps

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			256 8				241 10																			
	P80595	2 R63468			P8059			R6347	R50002					2 R68617							P80163				R8751	
	Recombinant platelet	Recombinant platelet	CGH/PDGF Bv-sis fusio	CGH/PDGF B fusion pro	Recombinant platelet	Recombinant platelet	Platelet-derived Grow	Recombinant platelet	Platelet-derived Grow	PDGF Bc-sis.	Sequence encoded by t	v-sis protein p28sis.	Recombinant platelet	Human PDGF-B precurso	щ	Truncated Platelet de	Human PDGF-B 119 subu	PDGF-B119.	rPDGF refolded B119 h	rPDGF-B119 from pCFM1	Biosynthetic multifun	PDGF-BB monomer unit.	PDGF mosaic peptide B	Mature human PDGF-B.	PDGF mosaic peptide B	PDGF analogue #3.
		36			. 38e		1.38e-02	1.386-02	: .	:.	1.386-02	1.38c-02	: .	1.38e-02	1.38e-02	1.38e-02	1.38e-02	1.38e-02	1	.38e-	. 38∈-	.38e-	٠.	.38e-	1.38e-02	

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06-SEP-1996.
22-FEB-1996; AU0094.
02-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
          Claim 14; Page 48; 113pp; English.

Splice variants (W00726-28) of the human vascular endothelial growth factor-like polypeptide SOM175 (see also W00725) are products of cDNA clones (see also SOM175 (see also T33510). They show at least 1 of the SOM175 gene (see also T33510). They show at least 1 of the properties of SOM175 including the ability to induce proliferation of vascular endothelial cells, to interact with fit-1/fik-1 receptors, and to induce cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. Recombinant SOM175 proteins can be used to induce astroglial proliferation and to promote neural survival and/or proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vascular endothelial growth Vascular endothelial growth astroglial proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W00728 standard; Protein; 101
                                                                                                                                                                                                                 New growth factor related to vascular endothelial growth factor -useful for inducing astroglial proliferation and promoting neuronal
                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-NOV-1996 (first entry)
                                                                                                                                                                                                    surviva
                                                                                                                                                                                                                                                                                  Weber G;
                                                                                                                                                                                                                                                                                                    Grimmond S,
                                                                                                                                                                                                                                                                                                                                                                                                                    WO9627007-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
 Sequence
                                                                                                                                                                                                                                                   N-PSDB; T33613
                                                                                                                                                                                                                                                                 WPI; 96-412774/41.
                                                                                                                                                                                                                                                                                                                     (AMRA-) AMRAD OPERATIONS
   101 AA;
                                                                                                                                                                                                                                                                                                  Hayward NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Sig_peptide
                                                                                                                                                                                                                                                                                                  PTY LTD.
Larsson C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor-like protein SOM175-e4.
factor; VEGF; SOM175-e4; neuron;
                                                                                                                                                                                                                                                                                                  Nordenskjold
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pscvtvqrcggccp

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RESULT
ID WO
AC WO
DT 25
DE Vo
KW EI
KW VI
KW VO
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OS MO
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                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                       PT vascular endothelial growth factor VEGF-B proteins - useful to PT accelerate angiogenesis in wound healing, also related nucleic acid PT and antibodies for cancer diagnosis

CC and 18; Page 53-54; 107pp; English.

CC W04824-W04831 represent the vascular endothelial growth factor (VEGF)

CC proteins of the invention, which promote endothelial or mesodermal cell

CC proliferation. VEGF is also a glycosylated cationic dimer, and is

CC diverse effects, depending on the specific biological context in which it

CC cis found. VEGF is also a glycosylated cationic dimer, and is

CC diverse effects, depending on the specific biological context in which it

CC cis found. VEGF is also a glycosylated can directly

CC contributes to induction of angiogenesis in vivo by promoting endothelial

CC cil growth during normal embryonic development, wound healing, and

CC tissue regeneration/reorganisation. The VEGF proteins of the invention

CC share the angiogenic and other properties of VEGF, but are distributed

CC and expressed in tissues differently to VEGF. The proteins can therefore

CC be used to accelerate angiogenesis in wound healing. Antibodies can

CC complementary to the coding sequences for the proteins can therefore

CC complementary to the coding sequences for the proteins of the invention

CC can also be used diagnostically to quantitatively detect VEGF-B. Primers

CC complementary to the coding sequences for the proteins of the invention

CC metastatic risk. VEGF-B expression in a cell can be retarded using

CC antisense sequences direct against the VEGF coding sequences, this is

CC especially useful in retarding VEGF expression in tumour cells.
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Best Local
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06-JEC-1995; US-469427.
06-JEC-1995; US-560000
              Vascular endothelial growth factor-B112. 
Endothelial cell; proliferation; vascular endothelial growth factor; VPF; VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; anglogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD O
Alitalo K, Eriksson U, Olofsson B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VBGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; anglogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; mouse.
  Mus musculus
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                                                                                                                                         28-APR-1997
                                                                                                                                                                                  W04828 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W04824 standard;
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                                                                                                                                                                                                                                                                                         pscvtvqrcggccp
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96-412582/41.
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                                                                                                                                                                                                                                                                                                                                                                      Similarity
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cell; proliferation; vascular endothelial
                                                                                                                                         (first entry)
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                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                      Protein;
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                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                    133 AA.
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                                                                                                                                                                                                                                                                                                                                              Score 121; DB 21; Pred. No. 6.06e-05; 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
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                                                                                                                                                                                                                                                        06-SEP-1996; 22-FEB-1996; 202-MAR-1995; 20-NOV-1995; 222-DEC-1995; 20-NOV-1995; 20-
survival
Claim 13; Page 46; 113pp; E
Splice variants (W00726-28)
                                                                          New growth factor re
useful for inducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       astroglial proliferation
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WPI; 96-412582/41.
N-PSDB; T37912.
                                                                                                                                                        WPI; 96-412774/41.
                                                                                                                                                                                   Weber
                                                                                                                                                                                                           Grimmond
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                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vascular endothelial growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W00727 standard;
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(UTHE-) UNIV HELSINKI LICENSING LID
alitalo K. Eriksson U, Olofsson B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
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Similarity 100.0%;
14; Conservative
                                                                                                                                   T33612.
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                                                                                                                                                                                                                                                        AU-001457.
AU-006647.
AU-007274.
                                                                                                                                                                                                        OPERATIONS
Hayward NK,
                                                                                                                                                                                                           Hayward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                 /label= Sig_peptide
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                                                                                                        related
                                                                             astroglial
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Larsson
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  of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor-like protein SOM175-e6+e7
factor; VEGF; SOM175-e6+e7; neuro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 121; DB 21; Pred. No. 6.06e-05; 0; Mismatches 0;
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                                                                             proliferation
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                                                                        endothelial growth factor eration and promoting neuro
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  vascular endothelial growth
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                                                                                                                                                                                         CC W04834-W04831 represent the vascular endothelial growth factor (VEGF) CC proteins of the invention, which promote endothelial or mesodermal cell proteins of the invention, which promote endothelial or mesodermal cell consistency of the invention, which promote endothelial or mesodermal cell proteins referred to as vascular permeability factor (VPF). VEGF has cliverse effects, depending on the specific biological context in which it is found. VEGF is a potent endothelial cell mitogen, and directly contributes to induction of angiogenesis in vivo by promoting endothelial cell growth during normal embryonic development, wound healing, and crissue regeneration/reorganisation. The VEGF proteins of the invention constant the angiogenesis in very but are distributed and expressed in tissues differently to VEGF. The proteins can therefore be used to accelerate angiogenesis in wound healing. Antibodies against the proteins can be used for inhibiting angiogenesis. The antibodies can complementary to the coding sequences for the proteins of the invention complementary to the coding sequences for the proteins of the invention complementary to the coding sequences for the proteins of the invention can also be used to detect VEGF-B coding sequences. Quantification of VEGF-B in cancer biopsy specimens may be useful as an indicator of complements used to detect VEGF-B coding sequences, changing antibodies can the sequences direct against the VEGF coding sequences, this is especially useful in retarding VEGF expression in tumour cells.
                                                                Query Match
Best Local S
Matches 1
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Best I
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06-SEP-1996.

01-MAR-1995; US-397651.

01-MAR-1995; US-469427.

06-JUN-1995; US-469427.

06-DEC-1995; US-469427.

07-MAR-1995; US-469427.

08-DEC-1995; US-469427.

09-MAR-1995; US-397651.

09-MAR-1995; US-3
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28-APR-1997 (first entry)
28-APR-1997 (first entry)
Fibrosarcoma vascular endothelial growth factor-B167.
Fibrosarcoma vascular endothelial growth factor; VPF;
Endothelial cell; proliferation; vascular endothelial growth factor; VPF;
VECF; endothelium; mesodermal cell; cationic dimer; tissue regeneration;
vascular permeability factor; cell mitogen; angiogenesis; cell growth;
embryonic development; wound healing; tissue reorganisation; antibody;
cancer: metastatic risk; tumour cell; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor-like polypeptide SOM175 (see also W00725) are products of cDNA clones (see also T33611-13) respectively lacking exon 6, exons 6+7, and exon 4 of the SOM175 gene (see also T33610). They show at least 1 of the properties of SOM175 including the ability to induce proliferation of vascular endothelial cells, to interact with flt-l/flk-l receptors, and to induce cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. Recombinant SOM175 proteins can be used to induce astroglial proliferation and to promote neural survival and/or proliferation. Sequence 143 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W04829
W04829;
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Similarity 100.0%;
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Similarity 100.0%;
14; Conservative
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Pred. No. 6.06e-05;
0; Mismatches 0
                                                                                                Score 121; DB 21;
Pred. No. 6.06e-05;
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06-SEP-1996; AU0094.
22-FEB-1996; AU-001457.
02-MAR-1995; AU-006647.
22-DEC-1995; AU-007274.
R 22-DEC-1995; AU-007274.
VARA-) AMRAD OPERATIONS P7
                                                                                                                                          06-SEP-1996.
22-FEB-1996; AU0094.
02-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 5; Fig 9; 113pp; English.

WRF167 (W00863) is the murine homologue of an alternatively spliced variant (W00726) of human vascular endothelial growth factor-like polypeptide SOM175 (W00725), a protein capable of inducing astroglial proliferation and of promoting neural survival and/or proliferation. Its amino acid sequence was deduced from a CDNA clone (T13810) isolated from a new-born mouse brain CDNA library. WRF167 shows 85% identity and 92% similarity to its human counterpart. It lacks 101 amino acids found in WRF186 (W00863), the murine homologue of SOM175, owing to a deletion of exon 6 during splicing.

Sequence 188 AA;
                                                                   Weber
                                                                                                                                                                                                                                                                                                                                                                                 vascular endothelial growth Vascular endothelial growth astroglial proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-NOV-1996 (first entry)
Murine VRF167
VRF; vascular endothelial growth factor; VEGF; SOM175; neuron;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W00864 standard; Protein; 188 W00864;
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                                                  WPI; 96-412774/41.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W00726 standard;
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                           N-PSDB; T33611
                                                                                                  Grimmond
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                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-NOV-1996 (first entry)
                                                                                                                        (AMRA-) AMRAD
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                                                                                                                   AU-007274.
                                                                                               Hayward
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
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Larsson
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188 AA.
                                                                                               Larsson
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Pred. No. 6.06e-05;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                               factor-like protein SOM175-e6.
factor; VEGF; SOM175-e6; neuron;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vascular endothelial growth factor al proliferation and promoting neuro
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                                                                                             Nordenskjold
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growth

factor

related

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vascular

endothelial growth

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PRESULT

AC WAY

AC WA
        PT accelerate angiogenesis in wound healing, also related nucleic acid
PT and antibodies for cancer diagnosis
Claim 18; Page 55-56; 107pp; English.
CC W04824-W04831 represent the vascular endothelial growth factor (VEGF)
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC contributes to induction of angiogenesis in vivo by promoting endothelial
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC cil growth during normal embryonic development, wound healing, and
CC constributes of the proteins of the invention
CC and expressed in tissues differently to VEGF. The proteins can therefore
CC the proteins can be used for inhibiting angiogenesis. The antibodies against
CC complementary to the coding sequences for the proteins of the invention
CC can also be used diagnostically to quantitatively detect VEGF-B. Primers
CC complementary to the coding sequences. Quantification of
CC metastatic risk. VEGF-B expression in a cell can be retarded using
CC especially useful in retarding VEGF expression in tumour cells.
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01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD OY.
Alitalo K, Eriksson U, Olofsson B, Pajusola WPI; 96-412582/41.
N-PSDB; T37910.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Heart vascular endothelia growth factor-B167. Endothelial cell; proliferation; vascular endothelial growth factor; VPF; VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; angiogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 12; Page 42-43; 113pp; English.

Splice variants (W00726-28) of the human vascular endothelial growth factor-like polypeptide SOM175 (see also W00725) are products of cDNA clones (see also T33611-13) respectively lacking exon 6, exons 6+7, and exon 4 of the SOM175 gene (see also T33610). They show at least 1 of the properties of SOM175 including the ability to induce proliferation of vascular endothelial cells, to interact with fit-1/fik-1 receptors, and to induce cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. Recombinant SOM175 proteins can be used to induce astroglial proliferation and to promote neural survival and/or proliferation.

Sequence 188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
W09626736-A1.
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28-APR-1997
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Similarity 100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              factor VEGF-B proteins - useful to wound healing, also related nucleic acid
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Pred. No. 6.06e-05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PT accelerate envolueries in wound healing, also related nucleic acid
PT and antibodies for cancer diagnosis
Claim 18; Page 56-57; 107pp; Enjalish.
CC W04824-W04831 represent the vascular endothelial growth factor (VEGF)
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC proteins of the invention, which promote endothelial or mesodermal cell
CC gometimes referred to as vascular permeability factor (VPF). VEGF has
CC diverse effects, depending on the specific biological context in which it
CC is found. VEGF is a potent endothelial cell mitogen, and directly
CC contributes to induction of angiogenesis in vivo by promoting endothelial
CC tissue regeneration/reorganisation. The VEGF proteins of the invention
CC share the angiogenic and other properties of VEGF, but are distributed
CC cell growth during normal embryonic development, wound healing, and
CC the used to accelerate angiogenesis in wound healing. Antibodies can the proteins can be used for inhibiting angiogenesis. The antibodies can
CC the proteins can be used for inhibiting angiogenesis. The antibodies can
CC use be used diagnostically to quantitatively detect VEGF-B. Primers
CC complementary to the coding sequences for the proteins of the invention
CC can also be used to detect VEGF-B coding sequences. Quantification of
CC metastatic risk. VEGF-B expression in a cell can be retarded using
CC especially useful in retarding VEGF expression in tumour cells.
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01-MAR-1996; U02957.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
                      Murine VRF186.
VRF; vascular endothelial growth factor; VEGF; SOM175; neuron; astroglial proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-APR-1997 (first entry)
28-APR-1997 (first entry)
Heart vascular endothelial growth factor-B174.
Endothelial cell; proliferation; vascular endothelial growth factor; VPF; VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; angiogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer: metastatic risk; tumour cell; mouse.
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ຖ. Pajusola ກ
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22-FEB 1996; AU0094.
02-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
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22-FEB-1996; AU0094.
22-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
(AMRA-) AMRAD OPERATIONS P.
              Human vascular endothelial growth factor (VEGF)-like polypeptide (W00725) is capable inducing the proliferation of vascular endothelial cells, of interacting with flt-1/fkl-1 receptors, and of inducing cell migration, cell survival and/or an increase in intracellular levels of alkaline phosphatase. It shows 33.3% identity with human VEGF (see also W00724). Splice variants (W00726-28) of SCM175 have also been identified. Recombinant SOM175 can be produced in host cells transformed with vectors carrying SOM175 cDNA (see also T33610). It is useful for inducing astroglial proliferation and for promoting neural survival and/or proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              library. An alternatively spliced variant, VRF169 (W00864), was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 5; Fig 9: 113pp; English.

VRF186 (W00863) is the murine homologue of human vascular endothel growth factor-like polypeptide SOM175 (W00725), a protein capable inducing astroglial proliferation and of promoting neural survival and/or proliferation. Its amino acid sequence was deduced from a cDNA clone (T13809) isolated from a new-born mouse brain cDNA
                                                                                                                                                                                                                                                                                             N-PSDB; T33610.
New growth factor re
useful for inducing
                                                                                                                                                                                                                                                   Claim 11; Page 41; 113pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        astroglial proliferation
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Pred. No. 6.06e-05;
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                                                                                                                                                                                                                                                       PT vascular endothelial growth factor VEGF-B proteins - useful to PT accelerate anglogenesis in wound healing, also related nucleic acid PT and antibodies for cancer diagnosis

SC Claim 18; Page 62; 10/pp; English.

CC W04824-W04831 represent the vascular endothelial growth factor (VEGF) CC proteins of the invention, which promote endothelial or mesodermal cell CC proliferation. VEGF is also a glycosylated cationic dimer, and is CC contents of the invention of the specific biological context in which it is found. VEGF is a potent endothelial cell mitogen, and directly CC cell growth during normal embryonic development, wound healing, and circular tissue regeneration/reorganisation. The VEGF proteins of the invention CC cell growth during normal embryonic development, wound healing, and circular the angiogenic and other properties of VEGF, but are distributed and expressed in tissues differently to VEGF. The proteins can therefore the used to accelerate anglogenesis in wound healing. Antibodies can camplementary to the coding sequences for the proteins of the invention CC complementary to the coding sequences for the proteins of the invention can also be used to detect VEGF-B coding sequences. Quantitication of C VEGF-B in cancer biopsy specimens may be useful as an indicator of C C metastatic risk. VEGF-B expression in a cell can be retarded using CC expecially useful in retarding VEGF expression in tumour cells.
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Endothelial cell; proliferation; vascular endothelial growth factor; VPF; 
VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration: 
vascular permeability factor; cell mitogen; angiogenesis; cell growth; 
embryonic development; wound healing; tissue reorganisation; antibody; 
cancer; metastatic risk; tumour cell; mouse.
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N-PSDB; T37915.
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(UYHE-) UNIV HELSINKI LICENSING L
Alitalo K, Eriksson U, Olofsson
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01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
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No. 6.06e-05;
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B, Pajusola
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28-APR-1997 (first entry)
Vascular endothelial growth factor-B186.
Endothelial cell; proliferation; vascula

vascular

endothelial growth factor;

VPF:

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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Matches 1
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01-MAR-1996; US-397651.
01-MAR-1995; US-397651.
06-UN-1995; US-469427.
06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(LUDW-) LUDWIG INST CANCER RES.
(UTHE-) UNIV HELSINKI LICENSING LTD OY Alitalo K, Eriksson U, Olofsson B, I WPI; 96-412582/41.
                                                06-JUN-1995; U07283.
06-JUN-1995; WO-U07283.
(HUMA-) HUMAN GENOME SCI
Olsen H, Rosen CA, Hu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              accelerate angiogenesis in wound healing, also related nucleic acid and antibodies for cancer diagnosis Claim 18; Page 60-61; 107pp; English.
W04824-W04831 represent the vascular endothelial growth factor (VEGF) proteins of the invention, which promote endothelial or mesodermal cell proliferation. VEGF is also a glycosylated cationic dimer, and is
                                                                                                                                       W09639421-A1.
                                                                                                                                                                                                                                                          Human vascular endothelial growth factor 3.

Human vascular endothelial growth factor; hVEGF3; angiogenesis; tumour; inflammation; rheumatoid arthritis; diabetic retinopath
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                                                                                                                                                                                         region
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human vascular endothelial growth factor
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/note= "conserved PXCVXXXRCXGCCN motif"
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healing, also related
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B. Pajusola
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This sequence is that of human vascular endothelial growth factor 3 (YEGF3). The growth factor can be used to stimulate angiogenesis and wound healing, and to promote vascular tissue repair. It can also be used to induce the growth of damaged bone, periodontium or ligament tissue. VEGF3 antagonists can be used to inhibit tumour growth, or to treat diabetic retinopathy, inflammation, rheumatoid arthritis or psoriasis. VEGF3 is structurally related to the PDGF/VEGF family and it includes the conserved signature motif for the family (see features table).
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Similarity 100.0%;
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47
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72
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26
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71
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                    /note= "residue 435 corresponds
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PT Nucleotide molecule encoding c-Fos induced growth factor protein - proserved in therapy, in manufacture of compositions for treatment of protein developmental disorders and in generation of transgenic animal protein as Fig 2: 64pp; English.

Claim 3; 
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30-SEP-1995; IB1113.
29-SEP-1995; GB-019928.
13-JUN-1996; GB-012368.
(UYSI-) UNIV SIENA.
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stop codon in reading frame 2 of HF175"
579
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stop codon in reading frame 2 of HF175"
553
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stop codon in reading frame 2 of HF175"
541
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stop codon in reading frame 2 of HF175"
608
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stop codon in reading
557
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stop codon in reading frame 2 of HF175"
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stop codon in reading frame 2 of HF175"
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stop codon in reading frame 2 of HF175"
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top codon in reading frame 2 of HF175"
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stop codon in reading frame 2 of HF175"
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Query Match Best Local S Matches 1

Similarity 10; Conser

83.5%; larity 76.9%; Conservative

Score 101; DB 22; Pred. No. 5.63e-03; 2; Mismatches 1

Length 620; Indels

0;

Gaps

0

Š 밁 214 69 ppcvnvercggcc 226 PSCVTVQRCGGCC 81

Search completed: Thu Nov 26 00:00:19 1998 Job time: 28 secs.

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MPsrch_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Tue Dec 1 11:43:00 1998; MasPar time 893.19 Seconds 1335.277 Million cell updates/sec

Title: >US-09-033-662-1 (1-666) from US09033662.seq 666

Description:
Perfect Score:
N.A. Sequence:
Comp: 1 ATGAGAAGGTGTAGAATAAG......GCCGGAAGCTGCGAAGGTGA 666
TACTCTTCCACATCTTATTC......CGGCCTTCGACGCTTCCACT

Scoring table: TABLE default Gap 6

Nmatch STD : Dbase 0; Query 0

Searched: 2275026 seqs, 895388244 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

embl-est55

Database:

1:em_est1 2:em_gss1 3:em_gss2 4:em_gss3
genbank-est107
5:gb_est1 6:gb_est10 7:gb_est11 8:gb_est12 9:gb_est13
10:gb_est14 11:gb_est15 12:gb_est16 13:gb_est17
14:gb_est18 15:gb_est19 16:gb_est2 17:gb_est20
18:gb_est21 19:gb_est3 20:gb_est4 21:gb_est5 22:gb_est6
23:gb_est7 24:gb_est8 25:gb_est4 25:gb_gss1 27:gb_gss2
28:gb_gss3 29:gb_gss4

Statistics: Mean 10.628; Variance 2.514; scale 4.228

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match I	Length	DB	ID	Description	
—	401	60.2	445	œ	AA292448	zt29f01.r1	zt29f01.rl Soares ovar
2	373	56.0	415	24	AA310070	EST180930 ;	EST180930 Jurkat T-cel
w	292	43.8	531	σ	AA434485	zw31a04.r1	Soares ovar
4	253	38.0	389	18	AI174183	ï	Soares mous
v	221	33.2	341	16	H39505		Homo sapien
σ	218	32.7	312	16	R90829	yn02g09.rl	Homo sapien
7	209	31.4	491	18	AI155033	ud78b11.r1	Soares mous
œ	192	28.8		17	AI117413	ub78g01.rl	Soares mous
9	161	24.2		23	AA073660	mm94g06.rl	Stratagene
10	154	23.1		11	AA082818	zn25d01.r1	Stratagene
11	132	19.8		21	AA040843	zk47h01.r1	Soares preg
12	121	18.2		22	AA182397	2036a04 r1	2
13	120	18.0	3	,			Stratagene

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26d02.r1 NCI_CGAE T189148 Normalize	n07.s1 NCI_CGAP	5.sl Stratager	005.rl NCI_CGAP_	xl Soares_fe	r1 NCI_CG	S1 NCI_CGAR	r1 NCI_CGAP_G	r1 NCI_CGAP_G	r1 NCI_CGAP_G	rl NCI_CGAR	r1 NCI_CGAE	r1 NCI_CGAP_	etal heart	Rice Immatur	5.rl Soares mou	Rice Immatur	.sl Soares par	7 Rice	Rice Immatur	1.s1 N	3.rl S	3.rl Homo sa	4.sl Soares ova	1 NCI_CGAP_	2.s1 Soares	5.sl NCI_CG/	l.rl Soares	5.sl NCI_CGAP_	02 Homo	
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ALIGNMENTS

FEATURES Source		TITLE JOURNAL COMMENT	REFERENCE AUTHORS	NID KEYWORDS SOURCE ORGANISM	RESULT 1 LOCUS DEFINITION
IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 941 Std Error: 0.00 Seq primer: -28m13 rev2 ET from Amersham High quality sequence stop: 425. Location/Qualifiers 1. 445 //organism="Homo sapiens" //note="Organ: ovary: Vector: pT/T3D (Pharmacia) with u modified polylinker; Site_1: Not I; Site_2: Eco RI; iv:	Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@watson.wustl.edu This_clone is available royalty-free through LLNL; contact the	nothman, m., nutched, m., nucabe, r., Le, m., Lennon, G., Marra, m., Parsons, J., Rifkin, L., Rohlfing, T., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and Wilson, R. WashU-Merck EST project Unpublished (1995)	Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 445) Hillier,L., Clark, N., Dubuque,T., Elliston,K., Hawkins,M.,	AAA29440 g1940468 EST. human. Homo sapiens	AA292448 445 bp mRNA EST 08-AUG-1997 zt29f01.rl Soares ovary tumor NbHOT Homo sapiens cDNA clone 723769 5' similar to TR:G1216396 G1216396 VEGF RELATED FACTOR ISOFORM VRF186 PRECURSOR. ;, mRNA sequence.

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RESULT 2
LOCUS
DEFINITION
                                                                                                             REFERENCE
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HOMO

I (bases 1 to 415)

I (bases 1 to 415)

Rotams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A.,

Bult, C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D.,

White, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C.,

Clayton, R.A., Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D.,

Fitzgerald, L.M., Fitzhugh, W.M., Fritchman, J.L., Geoghagen, N.S.,

Glodek, A., Gnehm, C.L., Hanna; M.C., Hedblom, E.; Hinkle, P.S.Jr.,
                                                                                                                                                                                         AA310070
g1962419
EST.
                                                                                                                                  Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Ho
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/clone="723769"
/clone=lib="Soares ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /lab_host="DH10B (ampicillin resistant)"
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Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of CDNA sequence
                                                                                                                                                                                                                                                                                         TAAAAAAAAAAAGACAGTGCTGTNAAGCCAGACAGGGCTGCCACCACCACCACCACCGTCCC 180
                                                                                                                                                                                                                                                                                                                                                                 CCCGAGCAGTCAGCTGGGGGAGATNTCCCTGGAAGAACACAGCCAGTGTGAATGCAGACC 120
             CGGGGCTTAGAGCTNAACCCAGACACCTGNAGGTGCCGGAAGCTGCGAAGGTGA 413
                                                                                     CCTGACCCCGGACCTNNCGCTGCCGCTGCCGACGNCGCAGCTTCCTCCGTTGCCAAGGG
                                                                                                                                         ACCCAATCCCACTCCAGCCCCAGGCCCCTCTGCCCACGCTGCACCCAGCACCACCAGTGC
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l Similarity 95.4%;
395; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: arkerlav@tigr.org
For clone availability, additional sequence and expression
information related to this EST, please check the TIGR Human
Index (http://www.tigr.org/tdb/hgi/hgi.html)
Seq primer: M13 Reverse.
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Fax: 3018699423
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Contact: Kerlavage, AJ
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/clone_lib="Jurkat T-cells V
/cell_type="T-lymphocyte"
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a 149 c 108 g 59 t
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Center Drive, Rockville,
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                                     CGTGACTGTGCAGCGCTGTGGTGGCTGCCTGGACGATGGCCTGGAGTGTGTGCCCAC 272
                                                       CGTGACTGTGCAGCGCTGTGGTGGCTGCTGCC-TGACGATGGCCTGGAGTGTGTGCCCAC 189
                                                                                                              GGTGGTGCCCTTGACTGTGGAGCTCATGGGCACCGTGGCCAAACAGCTGGTGCCCAGCTG 212
                                                                                                                               GGTGGTGCCCTTGACTGTGGAGCTCATGGGCACCGTGGCCCAAACAGCTGGTGCCCCAGCTG 130
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EST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL:
IMAGE Consortium (info@image.llnl.gov) for further i
Seq primer: -28m13 rev2 ET from Amersham
High quality sequence stop: 470.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 531)
Hiller,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jos: Hiller,L., LaCy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., Walte,Y., Walle,T., Waterston,R. and Wilson,R. WashU-Merck EST Project 1997
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
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Vertebrata; Mammalia;
                                                                                                                                                                                                                                                               h 43.8%;
Similarity 98.7%;
311; Conservative
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                                                                                                                                                                                                                                                                                                                                                           111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Pharmacia). Library constructed by Bento Soares and M.Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                         /db_xref="GDB:5980735"
162 c 163 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9606"
/clone="770862"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                 /lab_host="DH10B (ampicillin resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="ovarian tumor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex-"Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="Soares ovary tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mitochondrial eukaryotes; Metazoa; Chordata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                               Score 292; DB 6; Le
Pred. No. 0.00e+00;
0; Mismatches 1;
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                                                                                                                                                                                                                                                                                                    Length 531;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AI174183 389 bp mRNA EST 07-OCT-1998 uc07b07:r1 Soares mouse mammary gland NbMMG Mus musculus cDNA cl 1397269 5' similar to SW:VEGB_MOUSE P49766 VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR; mRNA sequence.

AI174183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Marra M/Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 38)

Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g3720325
EST.
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Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1996)
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The WashU-HHMI Mouse EST Project
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 primer: -28m13 rev2 ET from h quality sequence stop: 378
38.0%;
llarity 88.7%;
Conservative
                                                                                       68
                                                                                                                                                                                                                                     /tissue_type="mammary gland"
/dev_stage="4 weeks"
/lab_host="DH10B"
105 c 117 g 78 t
                                                                                                                                                                                                                          Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                      /sex="male"
                                                                                                                                                                                        /db_xref="taxon:10090"
/clone="1397269"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                     /clone_lib="Soares mouse mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         407
Score 253; DB 18;
Pred. No. 0.00e+00;
0; Mismatches 36;
                                   Length 389;
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l Similarity 307; Conser

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RESULT 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGCTGCTGCCCTGACGATGGCCTGGAATGTGTGCCCACTGCGAA-CACCAAGTCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAGGCCCTGTCTCCCAGCCTGATGCCCCTGGCCACCAGAGGAAAGTGGTGTCATGGA 112
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                                                                                                                                                                           Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. L Tel: 314 286 1800
Fax: 314 286 1800
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1 (bases 1 to 341)

Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
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Source: IMAGE Consortium, LLNL
This clone is available royalty free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further:
                                                                                                                                                              Email: est@watson.wustl.edu
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                                                                                Contact: Wilson RK
WashU-Merck EST Project
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Hiller, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
High quality sequence stops: 207
Source: IMAGE Consortium, LLNL
This clone is available royalty-free
                                           Email: est@watson.wustl.edu
                                                         Tel: 314 286 1800
Fax: 314 286 1810
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Location/Qualifiers
                                                                                                                                                                                                                                                                           Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ;
                                                                                                                                                                                                                                                                                                                                                       WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Lo
                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dub
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.
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llarity 97.5%;
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gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo. "
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/clone="167296"
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                                                                                                              /organism-"Mus musculus"
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polylinker; 1st strand cDNA was prepared from mammary
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 410)

Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubu Marra, M., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylle, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                               Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Lo
                                                                                                                                                                                                                                                                                                                                                                                     The WashU-HHMI Mouse EST Project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
Eukaryota; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
                                                                                                                                           Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                MGI:906356
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llarity 88.7%;
Conservative
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/clone="1476957"
/clone_lib="Soares mouse mammary gland NMLMG"
/sex="female (lactating)"
/tissue_type="mammary gland"
/lab_host="DH10B"
/organism="Mus musculus"
/organism="Mus musculus"
/note="Vector: pT773D-Pac (Pharmacia) with a modified
polylinker; 1st strand CDNA was prepared from mammary
gland tissue from a lactating female, and was then pri
                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 209; DB 18;
Pred. No. 0.00e+00;
0; Mismatches 30;
                                                                                                                    stop: 404.
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REFERENCE
AUTHORS
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Matches 22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
Eukaryotae; m
Vertebrata; E
                   Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further:
MGI:323058
Seq primer: -28m13 rev1 ET from Amersham
                                                                                                                                                             WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA073660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA073660 423 bp mRNA EST 15-FEB-mm94g06.rl Stratagene mouse heart (#937316) Mus musculus 536122 5' similar to TR:G1314336 G1314336 MVRF167. ;, mRN
                                                                                                                         Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
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                                                                                                                                                                                                                            Contact: Marra M/Mouse EST Project
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Unpublished (1996)
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primer: -28m13 rev1 ET from Amersham
h quality sequence stop: 411.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="Soares mouse mammary
/sex="female (lactating)"
/tissue_type="mammary gland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           mitochondrial eukaryotes; Metazoa; Chordata;
Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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Pred. No. 4.53e-273;
0; Mismatches 24;
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                                                                                                                                                                    Louis,
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                                                              ; contact the information.
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RESULT LOCUS

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                                                                                                                                                                                                                       Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 553)
Hillier,L., Clark, N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R. Washur-Marck EST Project Unpublished (1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA082818 553 bp mRNA EST 23-DEC-1997 zn25d01.rl Strategene neuroepithelium NT2RAMI 937234 Homo sap cDNA clone 548449 5' similar to TR:01216398 G1216398 VEGF RFL FACTOR ISOFORM VRF167 PRECURSOR. ;, mRNA sequence.
Email: est@watson.wustl.edu WARNING: There is evidence that suggests that the plate of this clone contains both human and mouse Thus, the origin of this clone is uncertain. This kept in mind should you use this clone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ch 24.2%;
l Similarity 95.6%;
174; Conservative
                                                                                                  Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. I Tel: 314 286 1810

Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                       Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
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XhoI; Cloned unidirectionally. Primer: Oilgo dr. 93
pooled NIH/Swiss 13 day embryo hearts. Average insert
size: 10 kb; Uni-ZAP XR Vector; -5' adaptor sequence:
GARITCGGCAGTAGT 3' -3' adaptor sequence: 5'
CTCGAGTTTTTTTTTTTTTTTTTTT 3'"
/db_xref="taxon:10090"
/clone="536122"
/clone=1b="Stratagene mouse heart (#937316)"
/sex="pooled"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>^</u>
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/strain="NIH/Swiss"
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Pred. No. 1.66e-219;
0; Mismatches 7;
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This clone is available royalty-free through LLNL; contact the

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11
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486001 5'
AA040843
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                                                                                      Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -28Mi3 rev2 from Amersham
High quality sequence stop: 314.
                                                                                                                                                                                                                                                              Washington University Sche
4444 Forest Park Parkway,
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 523)
Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M. Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: -28M13 rev2 from Amersham High quality sequence stop: 378.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Wilson RK
WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The WashU-Merck EST Project 
Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA040843
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Similarity 95.3%;
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/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="548449"
/clone_lib="Stratagene neuroepithelium NT2RAMI 937234"
/clone_lib="Stratagene neuroepithelial cells"
/dev_stage="Ntera-2/RA+MI neuroepithelial cells"
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                                                             Location/Qualifiers
/organism-"Homo sapiens
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Pred. No. 1.68e-207;
Viematches 7;
                                                                                                                                                                                                                                                                                                                                      School of Medicine way, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                             Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens cDNA clone
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REFERENCE
AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                           rel: 314 286 1800

Fax: 314 286 1810

Email: est@watson.wustl.edu

This clone is available royalty-free through LLNL; contact the

IMAGE Consortium (info@image.llnl.gov) for further information.

Seq primer: -28M.3 rev2 from Amersham

High quality sequence stop: 237.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Hom 1 (bases 1 to 374)
Hiller, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, Parsons, J., Rifkin, L., Rohlfing, T., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zp36a04.rl Stratagene muscle 937209 Homo 5' similar to TR:G1216398 G1216398 VEGF F VRF167 PRECURSOR. ;, mRNA sequence.
                                                                                                                                                                                                                                                                            Washington University Scho
4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                WashU-Merck EST Project 
Unpublished (1995)
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/clone="486001"
/organism="Homo sapiens"
/note="Vector: pBluescript SK-; Site_1: EcoRI; Site_XhoI; Cloned unidirectionally. Primer: Oligo dT. Sk muscle from patient with malignant hyperthermia. Av
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="adult"
/lab_host="DH10B"
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95.9%;
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Pred. No. 4.84e-170;
0; Mismatches 5;
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mRNA BASE COUNT ORIGIN

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCACGCTGCACCCACCACCACCACCACCACCCTGACCCCGGACCTGCCGCTGCCGCTGCCG 60
                                                                                                                                           Seq primer: -28m13 rev1 ET from
High quality sequence stop: 222.
Location/Qualifiers
                                                                                                                                                                                                    Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further
                                                                                                                                                                                                                                                                                Contact: Marra M/Mouse EST project
WashU-HHMI Mouse EST Project
WashIngton University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Lc
                                                                                                                                                                                                                                                                                                                                                                          Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.
Waterston,R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence.
AA117672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA117672 231 bp mRNA EST 15-F mo61a06.rl Stratagene mouse Tcell 937311 Mus musculus 558034 5' similar to TR:G1314336 G1314336 MVRF167. ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     136;
                                                                                                                                                                                            MGI:338826
                                                                                                                                                                                                                                                                                                                                                                  Unpublished
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Mus musculus
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Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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larity 95.8%;
Conservative
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                                                                                                           /organism="Mus musculus"
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Pred. No. 1.68e-151;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                    Louis,
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REFERENCE AUTHORS

ORGANISM

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Query Match
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                                                                                                  121 CTGCTGGCACCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           148 CCAGACACCTGTAGGTGCCGGAAGCCGCGAAAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         571 CGCTGCCGCTGTCGACGCCGCAGCTTCCTCCGTTGTCAAGGGCGGGGCTTAGAGCTCAAC
                                                                                                                                              61. ACGNCGCAGCTTCCCTCCGTTGCCAAGGGCGGGGCTTAGAGCTCAACCCAGACACCTGCAG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88 CGCTGCCGCTGCAGACGCCGCCGCCTTCCTCCATTGCCAAGGGCGGGGCGTTAGAGCTCAAC 147
                                                                                                                                                                                                                1 CCCACGCTGCACCCAGCACCAGCACCCCGGACCCCGGACCTGCCGCTGCCGCTGCCGCTGCCCG
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                                                                                                                               ACGCCGCAGCTTCCTCCGTTGTCAAGGGCGGGGCTTAGAGCTCAACCCAGACACCTGCAG
                                                                                                                                                                                              CCCACGCTGCACCCAGCACCACCAGTGCCCTGACCCCGGACCTGCCGCTGCCGCTGTCG 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Elucaryotae; Metazoa; Chordata; Vertebrata;
Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 225)
1 (bases 1 to 225)
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EST06302
T08411
                                                                                                                                                                                                                                                                                                                                                                                                                                            The Institute for Genomic 932 Clopper Road, Gaithers Tel: 3018699056 Fax: 3018699423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adams M.D., Soares, M.B., Kerlavage, A.R., Fields, C. and Rapid cDNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library Nature Genet. 4, 373-380 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g389439
                                                                                                                                                                                                                                                              h 17.7%;
Similarity 94.0%;
125; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human clone=HIBBD88 library=Infant
                                                                                                                                                                                                                                                                                                                                                49
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                                                                                                                                                                                                                                                                                                                                                                                                             mdadams@tigr.org.
Location/Qualifiers
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/dev_stage="M30 CD4+ cells"
/lab_host="SOLR (kanamycin resistant)"
<1. .>231
a 85 c 65 g 37 t
                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/clone="HIBBD88"
75 c 66 g 3
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Pred. No. 1.80e-146;
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cDNA clone
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. No. 8.00e-150;
Mismatches 18;
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Best Local Similarity 91.4%;
Matches 128; Conservative
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                                                                                                                                         479 GCAACGGAGGAAACTGCGGCGTCGGCAGCGGCAGTACAGAGTCCGGGGGTCAGGGCCCTT 538
                                                                                                                                                                                                                        666 TCACCTTCGCAGCTTCCGGCACCTGCAGGTGTCTGGGTTGAGCTCTAAGCCCCGCCCTTG 607
                                                                                                                                                                                                                                                                            419 TCACCTTCGCAGCTTCCGGCACCTGCAGGTGTCTGGGTTGAGCTCTAAGCCCCTGCCCTTG 478
  546
                                539 GTGGTGCTGGGTGCAGCGTG 558
                                                                                                               606 ACAACGGAGGAAGCTGCGGCGTCGACAGCGGCAGCGGCAGGTCCGGGGGTCAGGGCACTG 547
  GTGGTGCTGGGTGCAGCGTG 527
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Insert Length: 648 Std Error: 0.00.
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 411.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA Library Preparation: M. Bento Soares, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: Robert_Strausberg@nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D. Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1997)
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AA633535
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   103 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; 1st strand cDNA was prepared from pooled bulk
breast tumor tissue, and was then primed with a Not I -
oligo(dT) primer. Double-stranded cDNA was ligated to Eco
RI adaptors (Pharmacia), digested with Not I and cloned
into the Not I and Eco RI sites of the modified p7T3
vector. This library is the normalized version of
NCI_CGAP_Br1.1. Library was constructed by Bento Soares
and M. Fatima Bonaldo."
/db_xref="taxon:9606"
/clone="IMAGE:1131275"
/clone="IMAGE:1131275"
/clone="IMAGE:1131275"
/clone="Type="breast"
/issue_type="breast"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   146 c
                                                                                                                                                                                                                                                                                                                                 Score 116; DB 10; Length 565; Pred. No. 4.00e-143; O; Mismatches 12; Indels 0;
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Search completed: Tue Dec 1 12:22:18 1998 Job time: 2358 secs.

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MPsrch_nn ກ. ຜ. n.a. database search, using Smith-Waterman algorithm

Tabular output Run on: not generated Tue Dec 1 12:22:37 1998; MasPar time 99.63 Seconds 909.455 Million cell updates/sec

Description: Perfect Score: N.A. Sequence: Title: >US-09-033-662-1 (1-666) from US09033662.seq 666

Comp: 1 ATGAGAAGGTGTAGAATAAG..... ATGAGAAGGTGTAGAATAAG.........GCCGGAAGCTGCGAAGGTGA 666
TACTCTTCCACATCTTATTC.........CGGCCTTCGACGCTTCCACT

Scoring table: Gap TABLE σ default

Nmatch STD Dbase 0; Query 0

188442 segs, 68026449 bases × N

Post-processing: Minimum Match 0% Listing first 45 summaries

n-geneseq32
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part34 40:part40

Statistics: Mean 8.606; Variance 5.714; scale 1.506

score greater than Pred. No. d. No. is the number of results predicted by chance to have re greater than or equal to the score of the result being pu is derived by analysis of the total score distribution. printed,

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		356			1	Score 1
	42.8	53.9 53.8	66.8 66.8	90.7 83.8	100.0	Query Match 1
405	910 565	993 993	1242	1094 624	966	Query Match Length DB
228	283	233	28	23 28	31	BB
T37912	T33613 T37910	T3/913 T33612 T33611	T13809 T37914	T33610 T37915	T44071	ij
VEGE-B112 coding sequ	Vascular endothelial Adult heart VEGF-B167	Fibrosarcoma VEGF-Bib Vascular endothelial Vascular endothelial	Murine VRF186 cDNA. VEGF-B186 coding sequ	Vascular endothelial VEGF-B186 coding sequ	Human vascular endoth	Description
9.87e-145	1.29e-160 1.05e-158	1.49e-206 6.49e-206 2.83e-205	1.74e-285 4.71e-261	0.00e+00 0.00e+00	*0.00e+00	Pred. No.

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ALIGNMENTS

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RESULTATION OF THE HEAD OF THE
Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 666; Conservative
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12-DEC-1996.
06-JUN-1995; U
                                                                                                                                                                                                                       DNA encoding human vascular endothelial growth factor 3 - useful to develop prods. for, e.g. stimulating anglogenesis or treating tumours, inflammation or rheumatoid arthritis Claim 1; Page 43; 56pp; English.

This sequence encodes human vascular endothelial growth factor 3 (YEGF3). The growth factor can be used to stimulate angiogenesis and wound healing, and to promote vascular tissue repair. It can also be used to induce the growth of damaged bone, periodontium or ligament tissue. VEGF3 antagonists can be used to inhibit tumour growth, or to receive the diabetic retinopathy, inflammation, rheumatoid arthritis or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-SEP-1997 (first entry)
Human vascular endothelial growth factor 3 cDNA.
Human vascular endothelial growth factor; hVEGF3; anglogenesis; tumour; inflammation; rheumatoid arthritis; diabetic retinopathy; psoriasis; bone; periodontium; ligament; antagonist; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Olsen H, Rosen CA
WPI; 97-043056/04.
P-PSDB; W07611.
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Score 666; DB 31;
Pred. No. 0.00e+00;
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T33610;
T33610;
30-NOV-1996 (first entry)
Vascular endothelial growth fi
Vascular endothelial growth fi
astroglial proliferation; ss.
Homo sapiens.

Location/Quali
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W09627007-A1.
06-SEP-1996; AU0094.
22-FEB-1996; AU-001457.
02-MAR-1995; AU-001457.
20-NOV-1995; AU-007274.
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rs survival
rs claim 32; Page 39-40; 113pp; English.
County County Codes for a human vascular endothelial growth
county County Codes for a human vascular endothelial growth
county County Codes for a human vascular endothelial growth
county County Codes for a human vascular endothelial growth
county County Codes for a human of inducing
county County Codes for a human foetal brain
county Codes for a soluted by screening a human foetal brain
county Codes for a human chromosome 11435.

County Codes for a solution of solution of solution of solution of the human chromosome 1143.

Splice variants of SoM175 gene
county Codes for a human foetal spleen library.

County Codes for the foliation of the solution of the solutio
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Matches
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WPI; 96-412774/41.
P-PSDB; W00725.
New growth factor rel
useful for inducing a
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Local Similarity 99.2%;
les 614; Conservative
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Pred. No. 0.00e+00;
0; Mismatches 4
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BEST AVAILABLE COPY

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D UN-SEF-1995; U02957.

F 01-MAR-1995; U02-397651.

R 06-JUN-1995; US-469427.

R 06-DEC-1995; US-469427.

PA (LUDW-) LUDWIG INST CANCER RES.

PA (LYHE-) UNIV HELSIKKI LICENSING LTD OY.

PI Alitalo K, Eriksson U, Olofsson B, Pajusola K;

PR WPI: 96-412582/41.

DR P-PSDB; W04831.

PT Vascular endothelial growth factor VEGF-B proteins - useful to reclarate andiogenesis in wound healing, also related nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PT accelerate anglogenesis in wound healing, also related nucleic acid
PT and antibodies for cancer diagnosis
Claim 1: Page 61-62: 107pp; English.
CC 37909-T37915 represent the coding sequences for the vascular endothelial
CC growth factor (VEGF) proteins of the invention, which promote endothelial
CC dimer, and is sometimes referred to as vascular permeability factor
CC (VPF). VEGF has diverse effects, depending on the specific biological
CC context in which it is found. VEGF is a potent endothelial cell mitogen,
CC and directly contributes to induction of anglogenesis in vivo by
CC promoting endothelial cell growth during normal embryonic development,
CC wound healing, and tissue regeneration/reorganisation. The VEGF proteins
CC of the invention share the angiogenic and other properties of VEGF, but
CC are distributed and expressed in tissues differently to VEGF but
CC angiogenesis. The antibodies can also be used for inhibiting
CC angiogenesis. The antibodies can also be used diagnostically to
CC guantitatively detect VEGF-B. Primers complementary to the coding
CC sequences for the proteins of the invention can also be used to detect
CC VEGF-B coding sequences. Quantification of VEGF-B in cancer biopsy
CC specimens may be useful as an indicator of metastatic risk. VEGF-B
CC expression in a cell can be retarded using antisense sequences direct
CC VEGF-B coding sequences, Quantification of VEGF-B in cancer biopsy
CC sequence 624 BP; 106 A; 235 C; 179 G; 104 T;
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Best Local s
Matches 56
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                                                                                                          ctgtggtggctgctgcctgacgatggcctggagtgtgtgcccactgggcagcaccaagt
                              agaacacagccagtgtgaatgcagacctaaaaaaaaggacagtgctgtgaagccagacag 410
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   AGAACACAGCCAGTGTGAATGCAGACCTAAAAAAAGGACAGTGCTGTGAAGCCAGACAG
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Pred. No. 0.0
0; Mismatc
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  Query Match
Best Local S
Matches 55
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22-FEB-1996;
02-MAR-1995;
20-NOV-1995;
22-DEC-1995;
                                            Example 5; Fig 9; 113pp; English.

WRF186 cDNA (T13809) codes for the murine homologue (W00863) of human vascular endothelial growth factor-like polypeptide SOM175 (W00725), a protein capable of inducing astroglial proliferation and of promoting neural survival and/or proliferation. It was obtd. from a new-born mouse brain cDNA library using SOM175 cDNA (see also T33610) as probe. The murine VRF gene maps near to the centromere of chromosome 19. It is highly expressed in embryo tis and in the heart and brown fat of adult mice. An alternatively spliced variant, VRF169 (T13810), was also identified.

Sequence 1242 BP; 272 A; 409 C; 333 G; 228 T;
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                                                                                                                                                                                                           WPI; 96-412774/41.
P-PSDB; W00863.
New growth factor
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Murine VRF186 CDNA.
Wrs. vascular endothelial growth factor; VEGF; SOM175; neuron;
astroglial proliferation; ss.
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T13809;
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 72.5%;
l Similarity 89.7%;
551; Conservative
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; AU-001457.
; AU-006647.
; AU-007274.
AD OPERATIONS I
Hayward NK,
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/note= "polymorphic A
1186..1191
/*tag= f
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1163..1176
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166..228
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229..786
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576..676
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Larsson
Score 483; DB :
Pred. No. 1.74e:
0; Mismatches
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1.74e-285;
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06-SEP-1996.
01-MAR-1996; U02957.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-469063.
(LUDW-) LUDWIG INST CANCER RES.
(UTHE-) UNIV HELSINKI LICENSING LTD Alitalo K, Eriksson U, Olofsson B, WPI; 96-412582/41.
Vascular endothelial growth factor VEGF-B proteins - useful to accelerate angiogenesis in wound healing, also related nucleic acid and antibodies for cancer diagnosis Claim 1; Page 60; 107pp; English. 737909-T37915 represent the coding sequences for the vascular endothelial growth factor (VEGF) proteins of the invention, which promote endothelial or mesodermal cell proliferation. VEGF is also a glycosylated cationic dimer, and is sometimes referred to as vascular permeability factor
                                                                                                                                                                                                                                                                                                                                                                                                                28-APR-1997 (first entry)
VEGF-8186 coding sequence.
PROTECTION OF THE PROTECTION OF
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LT 6
T37913 standard; cDNA; 570 BP.
T37913;
28-APR-1997 (first entry)
28-DECOMMENT OF THE PROOF OF THE PROOF

vth factor; VFT
pregeneration;
cell growth;
on; antibody;

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CC (VPF). VEGF has diverse effects, depending on the specific Diological CC context in which it is found. VEGF is a potent endothelial cell mitogen, CC and directly contributes to induction of angiogenesis in vivo by CC promoting endothelial cell growth during normal embryonic development, CC wound healing, and tissue regeneration/reorganisation. The VEGF proteins CC of the invention share the angiogenic and other properties of VEGF, but CC are distributed and expressed in tissues differently to VEGF. The CC proteins can therefore be used to accelerate angiogenesis in wound CC healing. Antibodies against the proteins can be used for inhibiting CC quantitatively detect VEGF. B. Primers complementary to the coding sequences for the proteins of the invention can also be used to detect VEGF B. Coding sequences. Quantification of VEGF B in cancer blopsy CC specimens may be useful as an indicator of metastatic risk. VEGF-B CC expression in a cell can be retarded using antisense sequences direct CC VEGF expression in tumour cells.

SQ Sequence 624 BP; 124 A; 213 C; 173 G; 114 T;
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Similarity 89.5%;
510; Conservative
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Pred. No. 4.71e-261;
0; Mismatches 59;
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PT and antibodies for cancer diagnosis
PS Claim 1; Page 58-59; 107pp; English.

CC 37309-737915 represent the coding sequences for the vascular endothelial
PS Claim 1; Page 58-59; 107pp; English.

CC 37309-737915 represent the coding sequences for the vascular endothelial
CC or mesodermal cell proliferation. VEGF is also a glycosylated cattonic
CC dimer, and is sometimes referred to as vascular permeability factor
CC (VPF). VEGF has diverse effects, depending on the specific biological
CC context in which it is found. VEGF is a potent endothelial cell mitogen,
CC and directly contributes to induction of anylogenesis in vivo by
CC promoting endothelial cell growth during normal embryonic development,
CC wound healing, and tissue regeneration/reorganisation. The VEGF proteins
CC of the invention share the anylogenic and other properties of VEGF, but
CC are distributed and expressed in tissues differently to VEGF. The
CC proteins can therefore be used to accelerate anylogenesis in wound
CC anylogenesis. The antibodies can also be used diagnostically to
CC angulation any detect VEGF-B. Primers complementary to the coding
CC sequences for the proteins of the invention can also be used to detect
CC VEGF B coding sequences. Quantification of VEGF-B in cancer biopsy
CC expression in a cell can be retarded using antisense sequences direct
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T33612;
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Similarity 100.0%;
360; Conservative
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Pred. No. 1.49e-206;
0; Mismatches 0;
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22-FEB-1996; AU0094.
22-MAR-1995; AU-001457.
20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
(AMRA-) AMRAD OPERATIONS P
Grimmond S, Hayward NK,
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Key
cds
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3 cDNA clones (T33611-13) code for splice variants (W00726-28) of the human vascular endothelial growth factor-like polypeptide SOM175 (see also W00725). They were identified in a human foetal spleen library and respectively lack exon 6, exons 6+7, and exon of the SOM175 gene (see also T33610). The CNNA clones can be used to produce recombinant SOM175 proteins that are useful for inducing astroglial proliferation and for promoting neural surviving and/or proliferation.
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New growth factor related to vascular endothelial growth factor useful for inducing astroglial proliferation and promoting neuro
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                                                                                                                                                                                                                                                                                                                                    360;
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Similarity 99.7%;
360; Conservative
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3..65
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Larsson
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Pred. No. 6.49e-206;
0; Mismatches 1;
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RESULT 8
ID T31611 standard; cDNA; 993
AC T33611;
DT 30-NOV-1996 (first entry)

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RESULT 9
ID T33613 standard; cDNA; 910 BP.
AC T33613;
DT 30·NOV-1996 (first entry)
DE Vascular endothelial growth factor-like protein SOM175-e4 cDNA.
KW Vascular endothelial growth factor; VEGF; SOM175-e4; neuron;
KW astroglial proliferation; ss.
OS Homo sapiens.
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06-SEP-1996; AU0094.
22-FEB-1996; AU-001457.
02-MAR-1995; AU-001457.
20-NOV-1995; AU-007274.
22-DEC-1995; AU-007274.
(AMRA-) AMRAD OPERATIONS P
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Key
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Grimmond S, H
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PSDB; W00726.
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larity 99.7%;
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ESULT 10
D T37910 standard; cDNA; 565 BP.
C T37910;
T 28-APR-1997 (first entry)
DE Adult heart VEGF-B167 coding sequence.
KW Endothelial cell; proliferation; vascular endothelial growth factor
KW VEGF; endothelium; mesodermal cell; cationic dimer; tissue regen
KW vascular permeability factor; cell mitogen; angiogenesis; cell g
KW embryonic development; wound healing; tissue reorganisation; ant
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Example
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3 cDNA clones (T33611-13) code for splice variants (W00726-28) of the human vascular endothelial growth factor-like polypeptide SOM175 (see also W00725). They were identified in a human foetal spleen library and respectively lack exon 6, exons 6+7, and exon of the SOM175 gene (see also T33610). The CDNA clones can be used to produce recombinant SOM175 proteins that are useful for inducing astroglial proliferation and for promoting neural surviv and/or proliferation.
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06-SEP-1996.
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01-MAR-1995; US-397651.
06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD OY
Alltalo K, Eriksson U, Olofsson B, 1
WPI; 96-412582/41.
P-PSDB; W04826.

) OY. в. Pajusola '

7.

Vascular endothelial growth factor VEGF-B

proteins - u

BEST AVAILABLE CON

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PT accelerate anylogenesis in wound healing, also related nucleic acid process and antibodies for cancer diagnosis

Sclaim 1; Page 54-55; 107pp; English.

CC 373909-T37915 represent the coding sequences for the vascular endothelial cristoper context in which proteins of the invention, which promote endothelial connessodermal cell proliferation. VEGF is also a glycosylated cattonic context in which it is found. VEGF is also a glycosylated cattonic context in which it is found. VEGF is a special endothelial context in which it is found. VEGF is a potent endothelial context in which it is found. VEGF is a potent endothelial context in which it is found. VEGF is a potent endothelial in the promoting endothelial cell growth during normal embryonic development, contributes to induction of anylogenesis in vivo by context in which hall cell growth during normal embryonic development, contributed and expressed in tissues differently to VEGF but are distributed and expressed in tissues differently to VEGF. The categories can therefore be used to accelerate anylogenesis in wound consider the proteins can be used disponsition; anylogenesis. The antibodies can also be used disponsition; the vegf coding sequences. Outsitication of VEGF in cancer blopsy consist the VEGF coding sequences. Outsitication of VEGF in cancer blopsy consist the VEGF coding sequences, outsitication of vegf-b in cancer blopsy consist the VEGF coding sequences, outsitication of metastatic risk. VEGF-B coding antibodies can also be used in cancer blopsy consist the VEGF coding sequences, outsitication of metastatic risk. VEGF-B coding sequences of the sing antisense sequences direct vegf-b coding antisense sequences direct vegf-b coding antisense sequences direct vegf-b coding antisense sequences direct coding sequences. Outsitication of vegf-b coding in transfer direct vegf-b coding antisense sequences direct vegf-b coding antisense sequences direct coding sequences. Outsit is sepecially useful in retarding vegf-b coding code code code code code code c
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20-NOV-1995; AU-006647.
22-DEC-1995; AU-007274.
(AMRA-) AMRAD OPERATIONS P
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VRR169 cDNA (T13810) codes for a murine homologue (W00864) of an alternatively spliced variant (W00765) of human vascular endothelial growth factor-like polypeptide SOW175 (see also W00725), a protein capable of inducing astroglial proliferation and of promoting neural survival and/or proliferation. It was obtd. from a new-born mouse brain cDNA library using SOM175 cDNA (see also T33610) as probe. The murine VRF gene maps near to the centromere of chromosome 19. It is highly expressed in embryo tissue and in the heart and brown fat of adult mice. VRF169 lacks exon 6, found in VRF186 cDNA (T13809).

Sequence 1141 BP; 256 A; 361 C; 313 G; 211 T;
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VRF; vascular endothelial grastroglial proliferation; st
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114

Query Match Best Local :

Matches

Similarity 320; Conser

42.8%; larity 90.1%; Conservative

Score 285; DB 28; Pred. No. 1.05e-15; 0; Mismatches 3;

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CC T37909-T37915 represent the coding sequences for the vascular endothelial CC prowth factor (VEGF) proteins of the invention, which promote endothelial CC or mesodermal cell proliferation. VEGF is also a glycosylated cationic dimer, and is sometimes referred to as vascular permeability factor CC (VPF). VEGF has diverse effects, depending on the specific biological context in which it is found. VEGF is a potent endothelial cell mitogen, and directly contributes to induction of angiogenesis in vivo by CC promoting endothelial cell growth during normal embryonic development, wound healing, and tissue regeneration/reorganisation. The VEGF proteins cof the invention share the angiogenic and other properties of VEGF, but CC are distributed and expressed in tissues differently to VEGF. The proteins can therefore be used to accelerate angiogenesis in whound complements can therefore be used to accelerate angiogenesis in wound complements. The antibodies can also be used diagnostically to VEGF-B coding sequences. Quantification of VEGF-B in cancer biopsy specimens may be useful as an indicator of metastatic risk. VEGF-B cognish the VEGF coding sequences, this is especially useful in retarding vegenession in a cell can be retarded using antisense sequences direct complements.
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06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
(LUDW-) LUDWIG INST CANCER RES.
(LYME-) UNIV HELSINKI LICENSING LTD OY.
Alitalo K, Eriksson U, Olofsson B, Pajusola WPI; 96-412582/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 accelerate angiogenesis in wound and antibodies for cancer diagnos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration; vascular permeability factor; cell mitogen; angiogenesis; cell growth; embryonic development; wound healing; tissue reorganisation; antibody; cancer; metastatic risk; tumour cell; mouse; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Endothelial cell; proliferation; vascular endothelial growth factor; VPF,
VEGF; endothelium; mesodermal cell; cationic dimer; tissue regeneration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; W04828
   353
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                                                                                                                                                                                                                                               179
                                                                                                                                                                                                                                                                                113
                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                       53
                                                                                                                                                                                                                                                                                                                                                                                         59
                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                   acagccaatgtgaatgcagaccaaaaaaaaaa
                                                                                   tgcagatcctcatgatccagtacccgagcagtcagctggggggagatgtccctggaagaac
                                                                                                                                                          | 9t99ct9ct9ccct9ac9at99cct99aat9t9t9cccact999caacacccaa9tcc9aa
                                                                                                                                                                                                                                                                            tagacgtttatgcacgtgccacatgccagcccagggaggtggtggtggtgctctgagcatgg 178
                                                                                                                                                                                                                                                                                                                                                   expression in tumour ence 405 BP; 93 F
                                                                                                                                                                                                           AGCTCATGGGCACCGTGGCCAAACAGCTGGTGCCCAGCTGCGTGACTGTGCAGCGCTGTG
                                                                                                                                                                                                                               TGCAGATCCTCATGATCCGGTACCCGAGCAGTCAGCTGGGGGGAGATGTCCCTGGAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . cells.
113 C;
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                                                                                                                                                                                                                                                                                                                                                                                                                      Score 263;
Pred. No. 9.1
0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        factor VEGF-B wound healing,
                                                                                                                                                                                                                                                                                                                                                                                                                      re 263; DB 28; L
d. No. 9.87e-145;
Mismatches 34;
                                  389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteins - useful to also related nucleic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 405;
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                                                                                                                                                                                                                                                                                                                                                       PT and antibodies for cancer diagnosis.

Claim 1; Page 53; 107pp; English.

CC thim 1; Page 53; 107pp; English.

CC this represents a fragment of the mouse embryo vascular endothelial control of the five the factor. B (VEGF-B) protein coding sequence. The encoded proteins of the invention, and coding sequence. The encoded proteins of the invention, and coding sequence. The encoded proteins of the invention on the coding sequence of the invention share code of coding sequence of the invention share code of coding sequence of the coding sequence of complementary to the coding sequences of the proteins of the invention of coding sequences for the proteins of the invention of coding sequences of coding sequences. Quantification of coding sequences of the proteins of the invention of coding sequences of the proteins of the invention of coding sequences of the proteins of the invention of coding sequences for the proteins of the invention of coding sequences of coding sequences. Quantification of coding sequences of coding sequences of coding sequences of coding sequences.
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06-SEP-1996.
01-MAR-1996; U02957.
01-MAR-1995; US-397651.
06-JUN-1995; US-469427.
06-DEC-1995; US-569063.
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Key
cds
                                                                                                                                                                                                                                                                                       metastatic risk. VEGF-B expression in a cell can be retarded using antisense sequences direct against the VEGF coding sequences, this is especially useful in retarding VEGF expression in tumour cells. Sequence 886 BP; 227 A; 261 C; 226 G; 172 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       II 13
T37909 standard; cDNA; 886 BP.
T37909;
T37909;
28-APR-1997 (first entry)
Partial VEGF-B coding sequence.
Endothelial cell; proliferation; vascular endothelial
PVEGF; endothelium; mesodermal cell; cationic dimer; ti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vascular endothelial growth factor VEGF-B accelerate anglogenesis in wound healing, and antihodian for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UDDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD
Alitalo K, Exiksson U, Olofsson B,
WPI: 96-412582/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEGF; endothelium; mesodermal cell; cationic dimer; tissue regardscular permeability factor; cell mitogen; angiogenesis; cell embryonic development; wound healing; tissue reorganisation; accorder; metastatic risk; tumour cell; mouse; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; W04824, W04825
                 131
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tgtgcagcgctgtgggtggctgccctgacgatggcctggaatgtgtgcccactgggca
                                                                           gcctctgagcatggaactcatgggcaatgtggtcaaacaactagtgcccagctgtgtgac
                                                                                                                                                       agtggtgccatggatagacgtttatgcacgtgccacatgccagcccagggaggtggtggt
                                                     GCCCTTGACTGTGGAGCTCATGGGCCACCGTGGCCAAACAGCTGGTGCCCAGCTGCGTGAC
                                                                                                                                 AGTGGTGTCATGGATAGATGTGTATACTCGCGCTACCTGCCAGCCCCGGGAGGTGGTGGT 158
                                                                                                                                                                                                                               Similarity
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312..479
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/product=
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                                                                                                                                                                                                                             36.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     First reading frame VEGF-B fragment
                                                                                                                                                                                                       Score 241; DB 28;
Pred. No. 8.55e-131;
0; Mismatches 28:
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в, Pajusola
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also related
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ed nucleic
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                                                                                                                                                                                                                                                                                                                                                                                                                     PT accelerate anglogenesis in wound healing, also related nucleic acid pri and antibodies for cancer diagnosis

PS Claim 1; Page 56; 107pp; English.

CC 137909-T37915 represent the coding sequences for the vascular endothelial cor mesodermal cell proliferation. VEGF is also a glycosylated cationic dimer, and is sometimes referred to as vascular permeability factor (VPF). VEGF has diverse effects, depending on the specific biological context in which it is found. VEGF is a potent endothelial cell mitogen, and directly contributes to induction of anglogenesis in vivo by commoting endothelial cell growth during normal embryonic development, wound healing, and tissue regeneration/reorganisation. The VEGF proteins of the invention share the angiogenic and other properties of VEGF, but care distributed and expressed in tissues differently to VEGF. The proteins can therefore be used to accelerate angiogenesis in wound healing. Antibodies against the proteins can be used for inhibiting cances for the proteins can also be used diagnostically to vegF. The antibodies against the proteins can be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cances for the proteins can also be used for inhibiting cancer because the proteins can also be used for inhibiting cancer because the proteins can also be used for inhibiting cancer because the pr
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06-SEP-1996.

01-MAR-1995; US-397651.

06-JUN-1995; US-397651.

06-JUN-1995; US-569063.

(LUDW-) LUDWIG INST CANCER RES.

(LUW-) LUDWIG INST CANCER RES.

(LUW-) UNIV HELSINKI LICENSING LTD OY.

Alitalo K. Erikson U, Olofsson B, Pajusola K;

WPI; 96-412582/41.
                                                                                                                                                                                                                                                                                             Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vascular endothelial growth
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                                                                                                                                       CCCAGGCCCCTGTCTCCCAGCCTGATGCCCCTGGCCAGCAGAAAGTGGTGTCATGGA 112
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TAGATGTGTATACTCGCGCTACCTGCCAGCCCCGGGAGGTGGTGGTGCCCTTGACTGTGG
                                          tagacgtttatgcacgtgccacatgccagcccagggaggtggtggtgcctctgagcatgg 178
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                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                         27.5%;
larity 87.3%;
Conservative
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                                                                                                                                                                                                                                                                                                                            Score 183; DB 28; Pred. No. 2.78e-94;
                                                                                                                                                                                                                                                                                             Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS Disclosure; Fig 7(1-2); 94pp; English.

PS Disclosure; Fig 7(1-2); 94pp; English.

CF Fetal human vascular smooth muscle cells mRNA was isolated

CF for the preparation of a cDNA library.

CT the two forms of VEFG (Q10797 and Q10917) which arise through

different message splicing, have different properties. In partic.

CHPGF121 does not bind to heparin leaving more of the protein free to

Dind to VEGF receptor and increase the half-life and distribution of

CT the protein in circulation, whereas hBEGF165 binds heparin strongly.

The product can be used for angiogenesis and re-endothelialisation

Of inner vascular surfaces in wound healing, e.g. treatment of full-

thickness wounds such as dermal ulcers, venous ulcers and diabetic

ulcers, burns, in surgery, in balloon angioplasty and for the in

vitro culturing of endothelial cells. Hybrid growth factors of pDGF

and VEGF can exhibit a mitogenic profile between each factor and

can be used for wound healing or as inhibitors of angiogenesis for

e.g. preventing the growth of tumours.

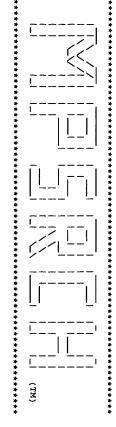
VEGF analogues in which CYS residues are substd. are more stable.

See also Q10791-93; Q10796-97; Q10806-08 and Q11099.

Sequence 366 BP; 110 A; 89 C; 103 G; 64 T;
                                                                                                                                                                                                                                                                                                                                                     Matches
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Key
cds
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Q11099;
Q11099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CALB-) CALIF BIOTECHN INC. Tischer ER, Abrhamam, Fiddes WPI; 91-073534/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    wound healing; hVEGF; PDGF;
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Human vascular endothelial cell growth factor 121.
Bovine vascular endothelial cell growth factor; an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JUL-1990; U04227.
27-JUL-1989; US-387545.
14-DEC-1989; US-450883.
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in wound healing
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Search completed: Tue Dec $1\ 12:26:11\ 1998$ Job time : $214\ secs$.

4



Release 3.1A John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1998 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd

MPsrch_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Tabular output not generated. Run on: Tue Dec 1 10:39:03 1998; MasPar time 990.87 Seconds 1481.258 Million cell updates/sec

Description:
Perfect Score:
N.A. Sequence:
Comp: Title: >US-09-033-662-1 (1-666) from US09033662.seq 666

1 ATGAGAAGGTGTAGAATAAG.......GCCGGAAGCTGCGAAGGTGA 666
TACTCTTCCACATCTTATTC.......CGGCCTTCGACGCTTCCACT

Scoring table: TABLE default Gap 6

Nmatch STD : Dbase 0; Query 0

Searched: 567134 seqs, 1101898692 bases x 2

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

1:em_ba 2:em_fun 3:em_htg 4:em_hum1 5:em_hum2 6:em_in 7:em_om 8:em_or 9:em_ov 10:em_pat 11:em_ph 12:em_pl 13:em_ro 14:em_v1 genbank107

Database:

15:gb_bal 16:gb_ba2 17:gb_htg 18:gb_in 19:gb_om 20:gb_ov 21:gb_pat 22:gb_ph 23:gb_pl1 24:gb_pl2 25:gb_pr1 . 26:gb_pr2 27:gb_pr3 28:gb_ro 29:gb_st 30:gb_sts 31:gb_sy 32:gb_un 33:gb_vi

Statistics: Mean 10.510; Variance 5.631; scale 1.866

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

gene		FEATURES Source	JOURNAL	TITLE	REFERENCE	JOURNAL	TITLE	AUTHORS	REFERENCE	ORGANISM	SOURCE	NID	ACCESSION	RESULT 1 LOCUS DEFINITION
Stratagene" /map="11413" /chromosome="11" /tissue_type="brain" /dev_stage="fetus" 3626 /gene="VRF"	/organism-"Homo sapiens" /note-"GDB DSEG number-D118750" /db_xref-"taxon:9606" /clone_lib-"Human fetal brain cDNA library from	Location/Qualifiers 11079	Submitted (15-DEC-1995) Ginters U. Silins, Human Genetics, Queensland Institute of Medical Research, Herston, Queensland, 4029, Australia	Direct Submission	2 (bases 1 to 1079)			<pre>Grimmond,S., Lagercrantz,J., Drinkwater,C., Silins,G., Townson,S., Pollock,P., Gotley,D., Carson,E., Rakar,S., Nordenskjold,M.,</pre>	Eukaryotae; mitochondriai eukaryotes; metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1079)	Homo sapiens	human.	91216395	complete cds. U43368	HSU43368 1079 bp mRNA PRI 07-MAR-1996 Human VEGF related factor isoform VRF186 precursor (VRF) mRNA,

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Submitted (27-MAR-1996) Ulf Eriksson,
Research, Karolinska Institutet, Dokto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 755)
Olofsson, B., Pajusola, K., Kaipainen, A., von Euler, G., Joukov Saksela, O., Orpana, A., Pettersson, R.F., Alitalo, K. and Eriks Vascular endothelial growth factor B, a novel growth factor
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Eriksson, U., Alitalo, K.,
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J. Biol. Chem. 271 (32), 19310-19317 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genomic organization of the mouse and human genes for vascular endothelial growth factor B (VEGF-B) and characterization of a
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/db_xref="piD:g148259"
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SPADITHPTPAGPSAHAAPSTTSALTPGPAAAAADAAASSVAKGGA"

269 c 217 g 125 t
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/map-"11q13"
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/db_xref="taxon:9606"
/tissue_type="fibrosarcoma HT-1080"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon_start=1
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1. no. 5;
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Doktorsringen 12A, Sto
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d Eriksson, 3.
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gene CDS	FEATURES sou	JOURNAL MEDLINE REFERENCE AUTHORS TITLE JOURNAL	AUTHOR TITLE	JOURNAL MEDLINE REFERENCE	REFERENCE AUTHORS	ORGANISM	ACCESSION NID KEYWORDS	RESULT LOCUS DEFINITION	Db 654 Qy 648	Db 594 Оу 588	Оу 528			
/Organism="Mus musculus" /db_xref="kxon:10090" /dev_stage="adult" /tissue_type="heart" 95718 95718 95718 /gene="VEGF-B" /gene="VEGF-B" /codon_start=1 /product="vascular endothelial growth factor B 186" /broduct="vascular endothelial growth factor B 186" /db_xref="piD:g1488261" /db_xref="piD:g1488261" /translation="MSPLLRRLLIVALLQLARTQAPVSQFDGPSHQKKVVPWIDVYAR /translation="MSPLERRLIVALLQLARTQAPVSQFDGDSLECVPTGQHQVRMQIL ATCQPREVVVPLSMELMGNVVKQLVPSCVTVQRCGGCCPDDGLECVPTGQHQVRMQIL MIQYPSSQLGEMSLEEHSQCECRPKKKESAVKPDRVAIPHHRPQPRSVPGMDSTPGAS	rce	second splice isoform J. Biol. Chem. 271 (32), 19310-19317 (1996) 96325041 3 (bases 1 to 896) Eriksson, U., Alitalo, K., Olofsson, B. and Pajusola, K. Direct Submission Submitted (27-MAR-1996) Ulf Eriksson, Ludwig Institute for Ca Research, Karolinska Institutet, Doktorsringen 12A, Stockholm 77, Sweden	Olofsson, B., Eriksson, U. Genomic organical	endothelial cells proc. Natl. Acad. Sci. U.S.A. 93 (6), 2576-258 96197355 2 (bases 1 to 896)	I (bases I to 896) I (bases I to 896) Olofsson, B., Pajusola, K., Kaipainen, A. Saksela, O., Orpana, A., Pettersson, R. F. Vaccular and the last			3 MMU52820 896 Mus musculus vasc	4 CCGGAAGCTGCGAAGGTGA 672 	4 CCGCAGCTTCCTCCGTTGCCAAGGGCGGGGCTTAGAGCTCAACCCAGACACCTGCAGGTG 653	4 AGGCTGCACCACCACCACCACCACCCCGGACCCCGGACCTGCCGCGCGCG	COMMON CONTROL OF THE CONTROL OF T	GGCTGCAACTCCCCACCACCACCCCGTTCTGTTCCGGCTGGGACTCTGCCCC	
KEYWORDS SOURCE Nus musculus Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Mus Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Mus Mus 1 (bases 1 to 1236) AUTHORS Nordenskjold,M., Weber,G. and Hayward,N. TITLE JOURNAL Biochem. Biophys. Res. Commun. 220 (3), 922-928 (1996) MEDLINE 96183052 REFERENCE 2 (bases 1 to 1236) AUTHORS AUTHORS Hayward,N.K.	z	Db 749 AGCCGCGAAAGTGA 762	Db 689 GCTTCCTCCATIGCCAAGGGCGGGCTTAGAGCTCAACCCAGACACCTGTAGGTGCCGGA 748	Db 629 GCACCCAGCGCCGTCAACGCCCTGACCCCCGGACCTGCCGCTGCCGCTGCAGACGCCGCC 5HP	Db 570 CATCCTCCCCAGCTGACATCCA-TCCCACTCCAGGCCCCAGGATCCTCTGCCCGCCTT 626	Db 510 CCATACCCCACCGTCCCCAGCCCCGCTCTGTTCCGGGGCTGGGACTCTACCCCGGGAG 569	Db 450 ACAGCCAATGTGAATGCAGACCAAAAAAAAGGAGAGTGCTGTGAAGCCAGACAGGGTTG 509	Db 390 TGCAGATCCTCATGATCCAGTACCCGAGCAGTCAGCTGGGGGGAGATGTCCCTGGAAGAAC 449	GTGGCTGCTGCCCTGACGATGGCCTGGAATGTGTGCCCACTGGGCAACACCAAGTCCGGA	270 AACTCATGGGCAATGTGGTCAAACAACTAGTGCCCAGCTGTGTGAGCTGTGAGCGCTGTG	Db 210 TAGACGTTTATGCACGTGCCACATGCCAGGGGGGGGGGG	Db 150 CCCAGGCCCCTGTGCCCAGTTTGATGGCCCCAGCAGAAGAAAGTGGTGCCATGGA 209	Query Match 72.5%; Score 483; DB 28; Length 896; Best Local Similarity 89.7%; Pred. No. 0.00e+00; Matches 551; Conservative 0; Mismatches 62; Indels 1; Gaps 1;	SPADIIHPTPAPGSSARLAPSAVNALTPGPAAAAADAAASSIAKGGA" BASE COUNT 170 a 317 c 254 g 155 t ORIGIN

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TICCTCCATTGCCAAGGGCGGGGCTTAGAGCTCAACCCAGACACCTGTAGGTGCCGGA 748
                                                                                                                                     ACCCAGCGCCGTCAACGCCCTGACCCCCGGACCTGCCGCTGCCGCTGCAGACGCCGCC 5k%
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TGCGAAGGTGA 666
                                                         ITCCTCCGTTGTCAAGGGCGGGCTTAGAGCTCAACCCAGACACCTGCAGGTGCCGGA 652
                                                                                                                                                                                  CCTCCCCAGCTGACATCACCCAATCCCACTCCAGCCCCAGGCCCCCTCTGCCCACGCT 532
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                GCTTCCTCCATTGCCAAGGGCGGGCTTAGAGCTCAACCCCAGACACCTGTAGGTGCCGGA 846
                                                   CCATACCCCACCACCGTCCCCAGCCCCGCTCTGTTCCGGGGCTGGGACTCTACCCCGGGAG
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                                                                                                                                  CATCCTCCCCAGCTGACATCATCCA-TCCCACTCCAGCCCCAGGATCCTCTGCCCGCCTT
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551; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (21-DEC-1995) Nicholas K. Hayward, Joint Experimental Oncology Unit, Queensland Institute of Medical Research, Bancro Centre, 300 Herston Rd, Herston, Brisbane, Queensland, 4029,
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llarity 89.7%;
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256. .813
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/db_xref="taxon:10090"
/clone="m175-m1"
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/dev_stage="neonatal"
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Pollock, P., Gotley, D., Carson, E., Rakar, S., No
Ward, L., Hayward, N. and Weber, G.
Cloning and characterization of a novel human
vascular endothelial growth factor
Genome Res. 6 (2), 122-129 (1996)
2, (bases 1 to 567)
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U43369
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Direct Submission
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                                                                                                                          h 54.1%;
Similarity 100.0%;
360; Conservative
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Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; H
(bases 1 to 567)
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                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
//codon_start=1
//product="VEGF related factor isoform VRF167 precursor"
//db_xref="piD:91216398"
//tanslation="MSPLLRRLLLAALLQLAPAQAPVSQPDAPGHQRKVVSWIDVYTR
//translation="MSPLLRGTVAKQLVPSCVTVQRCGGCCDDGLECVPTQQHQVRNQIL
MIRVPSSQLCEMSLEEHSQCECRKKKDSAVKPDSPRPLCPRCTQHHQRPDPRTCRCR
CRRRSFLRCQGRGLELNPDTCRCRKLRR"
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/note="GDB DSEG number=D118750"
/db_xref="taxon:9606"
/chromosome="11"
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AGAACACAGCCAGTGTGAATGCAGACCTAAAAAAAAAGGACAGTGCTGTGAAGCCAGACAG 410

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RESULT

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	105 a	/orc	roca	ent: US 56	cular endo	ksson, U.,	. (bases 1 to 570)	Unclassified.	Unknown.	Unknown.		g2086454	629	uence 10 f	629
,	198 c	/organism="unknown"	Location/Qualifiers	507918-A 1	othelial g	Olofsson,	to 570)	•						from paten	570 bp
	173 g	known"	ifiers	0 04-MAR-1	Vascular endothelial growth factor-B and DNA coding therefor	Eriksson, U., Olofsson, B., Alitalo, K. and Pajusola, K.								Sequence 10 from patent US 5607918.	DNA
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					and	and									777
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Query Match Best Local S Matches 36 y Match
Local Similarity 100.0%;
hes 360; Conservative Score 360; DB 21; Length 570; Pred. No. 1.99e-250; 0; Mismatches 0; Indels Indels 0; Gaps 0

밁 Ş 밁 Ş 밁 108 114 ATGGATAGATGTGTATACTCGCGCTACCTGCCAGCCCCGGGAGGTGGTGGTGCCCTTGAC 173 48 ATGGATAGATGTGTATACTCGCGCTACCTGCCAGCCCCGGGAGGTGGTGGTGCCCTTGAC CCCCGCCCAGGCCCTGTCTCCCAGCCTGATGCCCCTGGCCACCAGAGGAAAGTGGTGTC 107 233 167

Q 밁 2 228 234 CTGTGGTGGCTGCCCTGACGATGGCCTGGAGTGTGTGCCCACTGGGCAGCAGCAAGT 293

227

В δÃ g Ş 348 354 288 294 AGAACACAGCCAGTGTGAATGCAGACCTAAAAAAAAAGGACAGTGCTGTGAAGCCAGACAG 413 CCGGATGCAGATCCTCATGATCCGGTACCCGAGCAGTCAGCTGGGGGAGATGTCCCTGGA 353

ACCESSION DEFINITION Human vascular endothelial growth complete cds. U48801 gl234822 HSU48801 ğ mRNA PRI 19-AUG-1996 factor B precursor (VEGF-B) mRNA,

KEYWORDS

BEST AVAILABLE COPY

Db 354 AGAAC Qy 348 AGAAC	294 C 288 C	Db 234 CTG Qy 228 CTG	Db 174 TGT Oy 168 TGT	Db 114 ATG Oy 108 ATG	Db 54 CCC 111 Qy 48 CCC	Query Match Best Local Matches 3	BASE COUNT ORIGIN	mat_pept	gene			CDS	sig_pept		source		AUTHORS E			REFERENCE 1	ORGANISM H
ACACAGECCAGTGTGAATGCAGACCTAAAAAAAAGGACAGTGCTGTGAAGCCAGACAG 413 	IGCAGATCCTCATGATCCGGTACCCGAGCAGTCAGCTGGGGGAGATGTCCCTGGA 35 	TGTGGTGGCTGCCCTGACGATGGCCTGGAGTGTGTGCCCACTGGGCAGCACCAAGT 293 	TGTGGAGCTCATGGGCACCGTGGCCAAACAGCTGGTGCCCAGCTGCGTGACTGTGCAGCG 233 	ATGGATAGATGTGTATACTCGCGCTACCTGCCAGCCCCGGGAGGTGGTGGTGCCCTTGAC 173 	CCCGCCAGGCCCTGTCTCCCAGCCTGATGCCCCTGGCCACAGAGGAAAGTGGTGTC 113 	1 54.1%; Score 360; DB 25; Length 570; Similarity 100.0%; Pred. No. 1.99e-250; 160; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/gene="VEGF-8" /product="vascular endothelial growth factor B" 105 a 198 c 173 g 94 t	ide	ិសិសិ	/product="reascular endothelial growth factor B precursor" /product="reascular endothelial growth factor B precursor" /db_xref="pID:g1234823"	/gene="VEGF-B" /note="forms disulfide linked homodimers; forms disulfide linked homodimers; forms disulfide linked heterodimers with VEGF; binds heparin"	EGF-B	(HEL)" ide 466	/organism= nome septems /db_xref= ftaxon:9606" /chromosome="11" /map="11q13" /tissue_type="fibrosarcoma HT-1080; erythroleukemin v: ' /tissue_type="fibrosarcoma HT-1080; erythroleukemin v: '	1 2	tit	a, B., Alitalo, K. and Pajusola, K.	roc. Natl. Acad. Sci. U.S.A. 93, 2567-2581 (1996)	growth factor B, a novel growth factor t	ates; Catarrhini; Hominidae; Homo.	ial eukarvotes: Metazoa: Cho

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1 (bases 1 to 567)

Townson, S., Lagercrantz, J., Grimmond, S., Silins, G.,

Nordenskjold, M., Weber, G. and Hayward, N.

Characterization of the murine VEGF-related factor gene

Characterization of commun. 220 (3), 922-928 (1996)
                                                                                                                                                                                                                                                     U43837
g1314335
 Submitted (21-DEC-1995) Nicholas K. Hayward, Joint Experimental Oncology Unit, Queensland Institute of Medical Research, Bancro Centre, 300 Herston Rd, Herston, Brisbane, Queensland, 4029,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          320;
                                           Direct Submission
                                                     Hayward, N.K.
                                                                                                                                                                                Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha;
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Eriksson,U., Olofsson,B., Alitalo,K. and Pajusola,K.
Vascular endothelial growth factor-B and DNA coding therefor Patent: US 5607918-A 4 04-MAR-1997;
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(VEGF-B) mRNA, complete
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                                                                                                           Mus musculus
Eukaryotae; mitochondrial eukaryotes; Metazoa;
Vertebrata; Eutheria; Rodentia; Sciurognathi; M
                      endothelial
                                        Saksela,O., Orpana,A., Pette
Vascular endothelial growth
                                                                   Olofsson, B.,
 96197355
                Proc. Natl.
                                                                                                  Murinae; Mus
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                                                                                                                                                           house mouse
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larity 90.1%;
Conservative
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/translation="MSPLLRRLLLVALLQLARTQAPVSQFDGPSHOKKVVPWIDVY NI-
ATCQPREVVPLSMELMGNVVKQLVPSCVTVQRCGGCCPDDGLECVPTGQHQVKWQ.LL
MIQYPSSQLGENSLEEBISQCECRPKKESSAVKPDSPRILCPPCTQRRQRPDPKTCKCK
CRRREFLHCQGRGLELNPDTCRCRKPRK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="VEGF-related
/product="mvrf167"
179 c 166 g
                                                                               1 to 795)
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/db_xref="taxon:10090"
/clone="m175-m1"
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1. .567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="VEGF-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="whole brain"
/dev stage="neonatal"
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                Acad.
                            cells
                                                                     Pajusola,K.,
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                SCi.
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Pred. No. 1.61e-191;
0; Mismatches 35;
             U.S.A.
                                                       C., Kaipainen, A.,
Pettersson, R.F.,
                                          factor B,
               93
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                2576-2581
                                       Alitalo, K. and novel growth fa
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Myomorpha;
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RESULT 11
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Best Local S
Matches 32
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Local Similarity 90.1%;
hes 320; Conservative
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                                                                                            precursor,
AF032925
g2641621
Norway rat.
Rattus norvegicus
Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia;
Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                           AF032925 349 bp mRNA
Rattus norvegicus vascular endothelial
precursor, mRNA, partial cds.
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Submitted (08-FEB-1996) Ulf Eriksson,
Research, Karolinska Institutet, Dokto
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1ksson,U., Olofsson,B., Alitalo,K. and Pajusola,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/db_xref="taxon:10090"
/tissue_type="heart"
/dev_stage="adult"
95. .157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="piD:91334825"
/translation="MSPLIRRLLIALARTQAPVSQFDGSHQKKVVPWIDVYAR
ATCOPREVVVPLSMELMGNVVKQLVPSGVTVQRCGGCCPDDGLECVPTGQHQVRMQIL
MIQVPSSQLGEMSLEEHSQCECRPKKESAVKPDSPRILCPPCTQRRQRPDPRTCRCR
CRRRPFLHCQGRGLELNPDTCRCRKPRK"
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158. .658
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95. .661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="forms disulfide linked homodimers; forms disulfide
linked heterodimers with VEGF; binds heparin"
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orsringen 12A, Stockholm
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growth
                                                                                                                                              23-NOV-1997
factor B 186
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                          Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 349)
Mandriota,S.J. and Pepper,M.S.
Direct Submission
Submitted (03-NOV-1997) Morphology, University Medical Center,
rue Michel Servet, 1211 Geneva 4, Switzerland
rue Michel Servet, 1211 Geneva 4, Switzerland
                                                                                                                                                                                                        Sequence
136628
                                          1 (bases 1 to 405)
Eriksson, U., Olofsson, B., Alitalo, K.
Vascular endothelial growth factor-B
Patent: US 5607918-A 8 04-MAR-1997;
Location/Qualifiers
                                                                                                                                                                                        g2086453
                                                                                                                           Unclassified
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Similarity 90.5%;
314; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="placenta" /tissue_type="placenta" /note="RT-PCR product amplified from total RNA from rat placenta, using degenerate oigonucleotides; sequenced on both strands"
/organism="unknown"
113 c 120 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="vascular endothelial growth factor
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(VRF) 186 precursor; VEGF-B 186 precursor"
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/db_xref="taxon:10116"
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                                                                                                                                                                                                                                                                                           Submitted (31-AUG-1997) Abteilung Allgemeine Pharmakologie,
Universitaets-Krankenhaus Eppendorf, Martinistr.52, Hamburg 20246,
                                                                                                                                                                                                                                                                                                                                            Weil
    h 37.2%;
Similarity 89.2%;
282; Conservative
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Isolation and characterization of rat vascular endothelial
factor B (VEGF-B)
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotae; Metazoa; Cho
Rodentia; Sciurognathi;
1 (bases 1 to 453)
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Rattus norvegicus
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                                                                   /codon_start=2
/product="vascular endothelial growth factor B"
/product="ppD:g2766602"
/db_xref="ppD:g2766602"
/translation="KRKVVSWIDVYARATCQPREVVVPLSMEFMGNVVKQFVPSCVTV
/KRCGGCCPDDGLECVPIGQHQVEMQILMIQYPSSQLGEMSLEEMSQCECRPKRKESAV
KPDSPRTLCPRCTXRRXRPDPRTCCRCRCRRRFFLHCQGRGLELNPDTC"
a 126 c 136 g 84 t 2 others

    453
/organism="Rattus norvegicus"
/db_xref="taxon:10116"

                                                                                                                                                                      /note="VEGF-B"
                                                                                                                                                                                                /tissue_type="heart"
/note="isolated by PCR"
                                                                                                                                                                                                                                                                    Location/Qualifiers
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    Score 248; DB 28;
Pred. No. 1.19e-162;
0; Mismatches 34;
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Pred. No. 2.47e-1
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endothelial growth factor B mRNA,
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                              Length 453
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                           TGTGCAGCGCTGGTGGCTGCCTGCCCTGACGATGGCCTGGAGTGTGTGCCCCACTGGGCA
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136625
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l Similarity 90.48;
281; Conservative
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Eriksson, U., Olofsson, B., Alitalo, K.
Vascular endothelial growth factor-B
Patent: US 5607918-A 1 04-MAR-1997;
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Pred. No. 3.31e-157;
0; Mismatches 28;
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                                                                                                                                                                                                                                           Length
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DNA coding
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                                                                                                                                                                                                                                                   53 CCCAGGCCCCTGTCTCCCAGCCTGATGCCCCTGGCCACCAGAGGAAAGTGGTGTCATGGA 112
                                                                                                                                                                                                                                                               1 (bases 1 to 591)
Eriksson, U., Olofsson, B., Alitalo, K. and Pajusola, K.
Vascular endothellal growth factor-B and DNA coding therefor
Patent: US 5607918-A 6 04-MAR-1997;
Location/Qualifiers
1. 591
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Sequence 6 from patent US 5607918.
136627
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186 c 174 g
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